DH

1/4P

ECA/PHSD/HRP/91/3/5.2 OA

EDUCATION
TRAINING
MANUAL
No.11

EDUCATION STAFF TRAINING DEVELOPMENT PROGRAMME

COURSE MANUAL FOR TRAINERS

LC/NAIROBI

UNITED NATIONS
Economic Commission for Africa
January 1991

COURSE MANUAL FS. 3-1

TRAINING AND ORGANIZATIONAL EFFECTIVENESS

- Need
- System Approach to Training
- Training Needs Assessment

I. TRAINING

1. OBJECTIVE

It is the objective of every organisation to improve the performance and develop the potential of its employees at all levels in order to provide at all times a competent and adaptable staff for the effective conduct of the business. The Company considers that training can provide a significant contribution to this end in:

(1) Preparing employees adequately for their initial jobs.

(2) Assisting employees to improve the knowledge and skills needed in their current job, and helping them to acquire new knowledge and skills as the requirements of their job change.

(3) Preparing employees for future jobs and promotions in line with their planned personal development through the acquisition of new knowledge and skills and the broadening of their outlook.

2. PRINCIPLES

(1) Training is a responsibility of the line supervisor, with whom rests the ultimate responsibility for the job performance and cannot be delegated, recognising that

  (a) the greater part of effective training takes place on the job

  (b) formal training should have clear objectives based on job requirements and performance criteria & these objectives must be discussed with the employee.

(c) the line supervisor through his active encouragement, assistance and personal example plays a critical part in the effectiveness of training.

(2) Training should be defined by clear objectives based on improving job performance. No training is, therefore, effective if it does not result in improved performance.

(3) Training is not a right but a collaboration for mutual benefit. Likewise training in itself should not convey the right or expectancy to promotion.

(4) Recognising (2) and (3) above, training objectives should as far as possible be those to which the employee feels personally committed.

(5) Forecasting manpower requirements, selection of staff, appraisal and training form a continuous cycle. Division into separate sections while convenient may be unreal and should not hide the unity of the process.

3. SCOPE

The method of training depends firstly on the identified training need and the degree to which this matches already established programmes of training and secondly on consideration of which method profides the most appropriate learning value. Training may therefore, take the form of one or more of the following:-

On-the-job guidance, Special projects on the job, Individual training projects or instruction Correspondence course, Educational Assistance Classroom instruction (lecture/discussion/case work), Practical work, Discussion seminars, Training assignments, Simulation exercises

An Organisation is expected to meet the majority of the training needs through its own activities: where however, it is more economical, practical or appropriate, overseas courses or assignments are arranged through the service reputable training Consultancy Organisations.

II. THE TRAINING FUNCTION IN THE WORKING ORGANISATION

1. PURPOSE

Is to suggest a systematic way of thinking about "the training function". We shall not be concerned with any specific level or form of training, but with training as such, and in particular the manager's responsibility for it. By looking at training as a function of management based on a system of operations, we can derive information about the steps which the line manager and the training specialist can take with their colleagues in the working organisation to ensure that training is effective.

2. GENERAL PRINCIPLES

A systematic analysis must be based on sound general principles. There basic principles are suggested as a starting point for this chapter:

(a) training is the responsibility of the line manager;

(b) the aim of training is to improve job performance by extending knowledge, inculcating skills and modifying attitudes, so that individuals can work in the most economical, efficient and satisfying way;

(c) knowledge can be extended, skills inclucated and attitudes modified most effectively when good conditions for learning are provided.

.../

3. THE MANAGER'S RESPONSIBILITY

The first responsibility for the performance of any job belongs to the individual himself. The supervisor will have a double responsibility: he is responsible not only for his own job performance, but also for the performance of his staff. This pattern of "shared responsibility" continues up through the working orgaisation at all levels. The principle " the ultimate responsibility for the performance of staff rests with the manager" is an empty one unless we accept that many factors will influence job performance. Training is only one of the many methods by which performance can be improved. The manager must therefore be as responsible for training as he is for improvement in methods, materials equipment lay-out, communications and relationships and all the other activities or his working organisation.

This does not mean that every manager should be a training specialist any more than he should be a work study specialist or a designer of equipment and machinery. But it does not mean that every manager must know enough about training to ensure that the training function in his organization is being carried out effectively. He must know whether the knowledge, skills and attitudes which have to be learned reflect the true needs of both the individual and the organisation as a whole. He must know whether the the best conditions for learning them are being provided. Above all he must be able to check whether the learning was effective. He cannot assess whether aims were correct or learning conditions were right, until he is able to apply the yardstick of effectiveness to the performance of those who have been trained.

The amount of detailed training knowledge required by a manager will depend upon the size of the firm, the variety of its activities and upon the number of training specialists working in it. In a small firm the line manager may have to oversee every aspect of the total training effort.

He himself may have to draw up plans, carry them out and them find out how near he has come to his training target. On the principle of shared responsibility he will be wise to have his supervisors trained in methods of instruction so that they can do most of the face-to-face training as part of their general duties. He may also employ a full-time instructor who can provide guidance to the supervisors and assist in such tasks as the preparation of training manuals. All other training activities may be the manager's own personal concern. The bigger the organization, the more varied the types of training to be done, the more difficult it is for the manager to gain specialised training knowledge and to have the time to use it.

There will be a point according to the size of the organization and according to what that organization does when the manager must delegate most training duties to a specialist above the instructor level either inside the organization or outside it through a group scheme. But although he delegates duties, he can never delegate his final rseponsibility, particularly for training policy. Training effort is essentially team effort. All member of the working organization are members of the training team and they will all have something to contribute. Because of this, training specialists even training departments - should be regarded as providing services for the whole organisation on behalf of managers, and managers must know enough about training to ensure that these services are effective.

4. AIMS AND EFFECTIVENESS

If the general aim of training quoted earlier is recognised and accepted, it follows that training must satisfy real needs. The modern manager is not content to accept training as an act of faith, based on somebody's assumptions about what knowledge, skills and attitudes are appropriate.

He has to ensure that actual needs have been identified and analysed. Furthermore, he will know that there is little point in trying to measure the effectiveness of training unless he has a sound base-line from which to work. This means that the specific aim of every training scheme; course or programme should be described in such a way that later measurement of effectiveness is possible.

This is a lot easier said than done. Sometimes it is easy in theory to spell out specific aims, but difficult in practice to find suitable yardsticks. Sometimes yardsticks are available, but there are reasons, rational or irrational, why they cannot be used. Sometimes, particularly where training and education merge, the aims are so long-term that one cannot be sure whether one is measuring the effectiveness of the training scheme, or measuring something other than training which has had an influence on performance. However, the existence of difficulties does not make the task impossible; difficulties simply present a greater challenge.

5 THE TRAINING FUNCTION

We may now look more closely at training as a function, analysing it in terms of what is actually done. Beyond stressing the team approach, we are not concerned in this chaptern with who carries out specific duties, or with who is being trained in what spheres of knowledge, skill or attitude. We are concerned with the generality of the training function itself, which should be capable of application equally to managers learning stock control, to engineers learning how to diagnose faults on machines, or to operators learning how to produce good or services of the right quality and in the right quantity. There is a common logic to be found and a common chronology to be followed.

Since one must start from aims, the first general task is to identify training needs. When this has been done, a

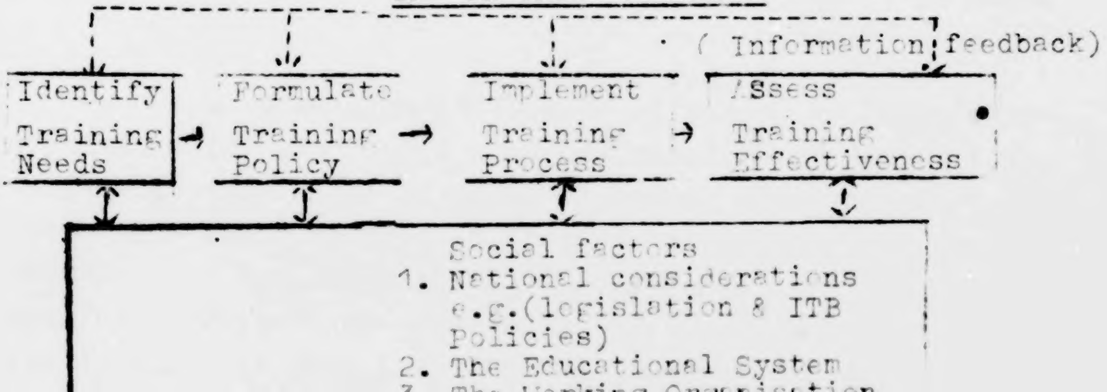
Policy has to be formulated to meet them. If this policy is acceptable to all concerned, detailed, consideration must be given to its implementation, with special reference to providing optimum conditions for learning. Finally, methods must be found by which the effectiveness of the training can be measured. This test of effectiveness will also be a test of how well training policy was formulated, and of the accuracy of the earlier identification of training needs on which that policy was based.

It is important to remember that these four aim tasks or steps will not be carried out in vacuo; they will be done in the context of what we may call social factors, which impose certain limits or constraints. Constrints will be imposed by the policies of the industrial training board(s) concerned with the particular working organisation, as well as by national legislation.

Another factor is the existence of the educational system. To integrate training with further education, the working organisation must make full use of the educational system and dovetail its efforts with what that system can provide. The last main social factor is the working organisation itself; we do not live in an ideal world where the training and education needs of the individual will always exactly match those of the organisation which employs him.

The four main steps in the training function, and the three broad types of social factors which provide the context of its operation, can be set out in diagram form:

THE TRAINING FUNCTION


(Information feedback)
Identify Training Needs
Formulate Training Policy
Implement Training Process
Assess Training Effectiveness
Social factors
1. National considerations e.g.(legislation & ITB Policies)
2. The Educational System
3. The Working Organisation

This "information loop" or "network analysis" way of looking at the training function serves to draw attention to several ~~important~~ points.

(1) The assessment of training effectiveness is seen as a crucial stage which provides "feedback information".

(2) With "feedback" the training function becomes a dynamic one leading to constant re-examination of needs, reformaulation of policy, and review of the training process itself. Without feedback, training is static-once-for-all exercise the value of which can never be assessed.

(3) There is a two-way interaction between the various steps and the social factors which provide constraints on how they are carried out. These constraints are not permanent and inflexible. The policies of the industrial training boards, provisions of the educational system, and working organisations themselves will change as more "training information" becomes available.

Other sections in this part of the maunal deal with two broad groups of social factors- legislation and the educational system - and it is therefore appropriate to look next at the working organisation itself. We will then list briefly some of the topics covered by the four main steps in the training functions: Identification of Training Needs, Formulation of Training Policy, Implementation of the Training process, and Assessment of Training Effectiveness.

For convenience, we will assume the existence of a specialist training officer who acts as a focus for questioning and decision-making about training in the working organisation. However, the team approach must be kept in mind. The training officer will not ask all the questions and make all the decisions; he will try to ensure that appropriate questions are asked by other people and that relevant decision on training are made at the right levels in the team.

A. THE WORKING ORGANISATION

The main questions to which the training officer must find satisfactory answers are as follows:

(1) What is the organisation seeking to do what is its production or service policy.

(2) What are the present work processes and systems by which it seeks to reach these objectives?

(3) What technological and other developments are foreseen which may change these processes and systems?

(4) What is the organisation's personnel policy what statutory or other conditons of employment may affect training?

(5) How is the firm organised and controlled what fundctions are given to managers at different levels and what formal and informal systems of communication have been built up?

(6) How far has joint consultation developed- What local and national trade union agreements exist?

(7) Is there a training committee - if not, would it be helpful to have one?

These are all background questions of considerable importance. Until the answers are known there is a danger that short-term and training needs may be identified at the expense of the longer-term and that policy may be formulated in such an artificial way that it could never be successful.

B. THE FOUR MAIN STEPS

Every step in the application of the training function is limited in some way by the social factors which have been listed. Every step taken will provide "feedback information" which will in turn modify these factors. Sound appreciation of limits, and mature judgement of the extent to which they can be modified at any point in time are the hallmarks of the expert training specialist.

We will examine the detail of the four main steps by again listing questions which have to be asked and answered. We must be content in this chapter with answers of the type which will lead to further questions a check-list approach. The training specialist and his colleagues must find the detailed answers themselves. They will differ not only from organisation to organisation, but also from time to time in the same organisation if the training function is a dynamic

1. The Identification of Training Needs

Two broad groups of basic questions are implicit under this heading; What are the Jobs for which training is necessary, and who are the people who have to be trained?

(I) JOBS

What are the Training Priorities?

This question will lead to an examination of measures of operational efficiency. If the training officer asks further questions about manpower turnover, accident and sickness rates, casual absenteeism, restrictive practices and labour disputes, quality and quantity standards (e.g. Qualified Worker Standards), wastage and scrap rates, down time and waiting time, customer complaints and other opinion pressures, he should be able to identify barriers to improved performance which training might remove.

a. What are the circumstances in which the jobs are performed?

It is not uncommon to find that a so-called " training problem" could be solved more readily or more economically by a change in job circumstances, methods of work, or design and layout of equipment. Whether or not this is so, safety considerations are always important in analysing a job and devising a training programme for it. Special hazards may exist when the job is paced, dirty, hot, cold or noisy, or when methods, design and layout are poor.

b. WHAT ARE THE TECHNIQUES BY WHICH THESE JOBS MAY BE ANALYSED?

There is a wide range of analytical techniques available according to the type of importance of the job; trained observation, questioning, job breakdown (as developed by TWI JOB INSTRUCTION), formal job analysis, skills analysis, work study, and the statistical techniques often required to complete a large scale analysis.

c. What levels of required performance does the analysis reveal?

Every job can be analysed in terms of the attitude/knowledge/skill pattern required (Fryer, 1951). It is often useful to express the results in terms of levels of abilities and interests, following the NIIP Seven Point Plan(Rodger, 1951). The identification of training needs on this basis carries the great advantage that the resulting " specification" can also be used for selectionpurposes.

II. PEOPLE

How many people have to be trained to these levels of performance; and where will they come from?

The analysis should reveal whether the job needs a manager, supervisor, professional or technological specialist, technician, craftsman, commercial or clerical worker, operator, sub-operator, or some other category-and how many of these are required. Are they to be recruited from outside, selected from within or is the problem one of retraining existing workers? Depending on the answers to these questions, the training officer may have to ensure that adequate selection methods are used. He may himself be responsible for selection as well as training.

2. The Formulation of Training Policy

With all these facts and estimates at his disposal, the training officer is now in a position to formulate a policy for consideration by line managers. In doing so, he will look ahead to the implementation of the training process & the assessment of the effectiveness of the training, and draft his proposals within the limits imposed by legislation and ITB policies, the educational system and the working organisation.

He does not draw up plans in isolation. He will have done his analysis and made his projections as a coordinator of a team effort, taking care to keep all the "key people" informed as the outlines of policy develop. The end product of the team effort may be a well-written and well-presented report, but its value will be limited if it is not based on proper consultation.

The training officer must make use of all his social skills and be highly critical of his own work. Questions he should be asking are: "Is ther anything I have left out? Is there anyone I have left out? Is there anything I could explain more simply? Am I being realistic? Is there anyone likely to oppose this genral policy?" Even if he is satisfied that he has the right answer to these questions, the training officer will be well advised to circulate his final report in draft form before submitting it for formal discussion and approval.

3. Implementation of Policy - The Training Process

Once again, there are two broad groups of questions to be asked and answered. These cover Training administration, and training Methods, aids and devices.

I. TRAINING ADMINISTRATION

(a) What type of training is to be given?

The earlier identification of training needs will indicate whether priority should be given to induction and backgroun training, initial job training, progressive training, refresher training, specific retraining, or "appreciation" training. By appreciation training - an important but often neglected area we mean training particularly for supervisors and managers, in a related area of work about which they need a broad knowledge in order to perform their own work more satisfactorily (e.g. computor appreciation courses, and brief courses leading to a better appreciation of the training function itself).

(b) Where is training to be carried out, and what form should it take?

Training may be on the job; in a training bay or training position; in a works school, centre, workshop or works staff college; at a centre run by the industry or by the appropriate training board; at a Government Training Centre; at an educational establishment; at a privately run centre; or even by home-based correspondence course.

Training can by wholly within the firm or be supplemented by day-release, block-release or sandwich arrangements; by full-time educational courses; by evening courses of correspondence courses. Quite often, the needs of the firm and the individuals concerned would best be catered for by group schemes (involving a group os firms).

(c) What is the length of the training period?

Usually it is better to judge the length of training by reference to the type of performance necessary for the job, rather than have as the starting point "how much time can be spared and what can be done in that time?" However, this is not an invariable rule. Where a well-defined criterion of job performance exists (e.g. Qualified Worker Standard), there is no virtue in any other approach. Supervisory, managerial and many specialist jobs of a "social" nature are different - they are "expanding universes" where criteria of performance are difficult to establish. For such jobs, one often starts from the"how much time can be spared" principle.

(d) How should programmes and courses be designed?

As a subsequent chapter will show, course design is an art in itself. In the present context, we can only point to the need to specify the aims, and to appreciate the problem of reconciling the needs of the trainees with those of instructors and others who have to fit training commitments into their other jobs.

(e) Learning Methods Aids and Devices

It is not possible to design a training course without reference to the methods, aids and devices which will be used. Working from the general to the particular, the training officer and his instructors will need a broad appreciation of learning and teaching theory, including aspects such as motivation, incentives, attitudes to learning, creativity, individual differences, group processes and the design of instruction. They will also take into account the learning problems of particular age groups and particular categories of trainees.

II. WHAT ARE THE METHODS TO BE USED?

Methods may be classified broadly into those suitable for group instruction for individual instruction, or for general use with groups or individuals. The choice will depend on such factors as subject matter, the location of the training (e.g. on or off the job), the numbers of trainees available at any one time and their age and previous experience.

The range of group methods is biggest and it is convenient to list them in approximate order of the degree of active participation they demand from the trainees. Unless it is vilid, interesting and supported by visual aids, the lecture tends to be the least demanding method. At the other end of the 'participation scale' we can place 'sensitivity training' (T-groups). Between these extremes we can list lesson method (built) on questioning technique), discussion (with or without chairman or expert witness), case study (including in-tray exercises and business games) and role play (including role-reversal).

Purely individual methods are correspondence and private study courses, but even these are often supplemented by discussion or similar group exercises. Among genral methods are programmed instruction, Training Within Industry Job Instruction, practical demonstration and project work. All these may be used with groups or with individuals, depending on the medium employed. Thus closed-circuit television or film can make available to a group a practical demonstration normally observable in detail by one individual only. This brings us to the next question.

III. What learning aids and devices are available?

It is essential that aids and devices are labelled "aids to learning" rather than " teaching aids". The training specialist is concerned with helping the learner rather than himself. It goes without saying that the correct use of aids and devices also simplifies the task of the teacher, but his needs should be subordinate to those of his learners. The correct description of aids is thus a point of some importance, since it will reflect the training specialist's approach to his work.

Aids and devices can be grouped according to the senses through which the learner is getting his information. Although in some circumstances the senses of taste and smell can be used (and opportunities for doing so should not be neglected), the four main groups are visual, audio, audio-visual and " multi-sensory".

In terms of visual aids, the range is very wide - from chalkboards to fixed models. It includes magnetic boards, flannelgraphs, silent projectors of various kinds, textbooks, notes and other printed handouts purely audio aids include tape-recorders, discs, signal generators, and are not restricted to use of the human voices. Audio-Visual aids, which employ both "sensory channels" at once and thus increase the amount of information, include sound-filmstrips, sound film, direct closed-circuit television, video tapes and broadcast television.

The multi-sensory group includes all those aids which make use of the sense of touch, as well as sight and hearing: Real machines can be placed in this category, as well as working models and simulators.

The general principle should be secure maximum participation of the learner by using methods, aids and devices which make use of all the relevant senses, and to reduce straight lecturing to the minimum.

4. The Assessment of Training Effectiveness

Without training records, there can be no test of training effectiveness. The training officer must be conversant with the genral principles of the design of both insturctors' records of trainees and trainees records of their won progress.

(a) What is meant by "assessing effectiveness"?

"Assessment" is used as a neutral term to cover the linked but separate processes of validation adn evaluation "Martin, 1957). The evaluation of training seeks an answer to the question "Is this training programme worthwile?". It has to do with "cost-effectiveness". But before a programme can be evaluated in this sense, it is necessary to ask whether the training programme is valid.

In doing so, it is useful to distinguish two elements: there are two distinct questions to answer. First, does the training do what it set out to do?. Second, is the design right was the training designed with the real requirements of the job clearly in mind?. It is not unknown for a training course to aim at the wrong target and it is certainly not uncommon for the purpose of a course to be vague.

The training officer is therefore concerned with two types of validity. When he asks whether a course or programme achieves the specific objectives of the training, he is asking about its internal validity. Whch he asks whether these specific objectives were the right ones he is asking about its external validity.

It is only when these two questions have been answered satisfactorily that the training officer and his colleagues can move on to evaluation the analysis of the value of training in the the "Cost-Effectiveness" sense. One must weigh training costs against increased efficiency, both short-term and long-term, and consider whether there were any alternative methods of achieving the same short-term and long-term results. Evaluation of training is not a matter for the training specialist alone.

He will work closely with the firm's accountants, whose costing techniques can be applied to training as they are applied to other areas of the firm's activities.

(b) What methods of assessment should be used?

There are two broad systems- continous assessment and terminal assessment. In continous assessment, tests are applied througout the whole training process and are designed to measure developing performance, over the whole period of training. Traditional terminal assessments have the disadvantage of testing the trainee at only one point in time when "mood of the moment" or "state of Health" might be significant. They also need frequent review to check whether they are really examining what the trainee needs to know or to do.

The training officer will naturally use objective methods as far as he can, but he will frequently have to rely on his own judgements and those of others. Although objective measures are to be preferred they cannot be used unless they meet three requirements, They must be scientifically sound, they must be administratively convenient, and they must be "Politically" acceptable. Administrative convenience and political acceptability will often dictate continuous assessment rather than terminal assessment methods. Tests given as part of the training process can be fitted into the programme, and individuals will accept them as natural to the scheme of things. The political acceptability of objective testing is often very doubtful in training for managers, supervisors and other older people who might not take kindly to the fromal examination atmosphere so difficult to avoid in terminal testing.

Objective knowledge tests, tests of skill, and attitude scales are available or can be constructed with expert assistance. When they cannot be used subjective methods should be made as objective as possible. This is usually achieved by ensuring (a) that the observer or interviewer iw well trained, (b) that his subjective judgements are based on as much factual material as he can collect and (c) that wherever possible, his findings are compared with those obtained by another skilled and independent observer.

(c) The need for research

It is not easy for the training specialist and his colleagues to identify variables within and outside the training situation which may have a bearing on performance, let alone control them. For example, the measures of operational efficiency examined in the original identification of training needs may change during the training process for reasons which have nothing to do with training.

There may have been changes in work methods, type of supervision, quality of materials, or sales or service policy. If the relative effectiveness of different training methods is being examined, it is sometimes possible to equate training groups (or allow for differences by statistical means) in respect of age, sex, intelligence, and specific abilities. It is not so easy to make allowance for influences such as instructor ability, location of training and health and personality characteristics of trainees. Large samples and random allocation of trainees to different methods and different instructors, may minimise the influence of these variables but it is a very fortunate training officer who can design his research to the satisfaction of a critical statistician. Particularly in the small firm, he simpley has to do his best to assess effectiveness as objectively and disinterestedly as he can.

He will be well advised to make a modest start with a form of training which is readily measurable and not, for example, plunge straight into an attempt to test the effectiveness of manager training. He may also consider the possibility of linking up with other training officers in the locality, under the general guidance of a trained research worker in the neighbouting university or technical college, so that "group" schemes of testing effectiveness of training could be worked out. There is wide scope for co-ordination of research; the bigger the samples, the better the overall design of experimeents and investigations, the more likely we are to get "feedback information for more general application.

Bibliography

Fryer, D.H.	Training, with special reference to its evaluation *Personnel Psychology* 1951, 4, 19-37
Martin, A.O.	The Assessment of Training *Personnel Management*, 1957 , Vol 39, No. 340
Rodger, A.	The Seven Point Plan. Paper No. 1 National Institute of Industrial Psychology, London, 1951.
DSIR	Training made easier. HMSO, London 1960
King, S.D.M.	Training Within the Organisation. Tavistock Publications, London, 1964
Seymour, W.D.	Industrial Skills. Pitman, London 1966
Wellens, J.	The Training Revolution. Evans Bros, London, 1963.

III. WHAT IS THE SYSTEMS APPROACH?

There seems to be agreement that the systems approach sprang to life as a semantically identifiable term sometime during World War II. It was associated with the problem of how to bomb targets deep in Grmany more effectively from British bases, with the manhattan Project, and with studies of optimum search patterns for destroyers to use in locating U-boats during the Battle of the North Atlantic.[4] Subsequently, it is utilised in the defeat of the Berlin blockade. It has reached its present culmination in the success of great millitary systems such as Polaris and Minuteman.

Not surprisingly, the parallels between military and marketing strategies being what they are the definition of the systems approach propounded by the RAND Corporation for the U.S. Air Force is perfectly apt for marketers.

...

"An inquiry to aid a decision-maker chose a course of action by systematically investigating his proper objectives, comparing quantitatively where possible the costs, effectiveness, and risks associated with the alternative policies or strategies for achieving them and formulating additional alternatives if those examined are found wanting."

The systems approach is thus an orderly "architectural" discipline for dealing with complex problems of choice under uncertainty.

Typically, in such problems, multiple and possibly conflicting objectives exist. The task of the systems analyst is to specify a closed operating network in which the components will work together so as to yield the optimum balance of economy, efficiency, and risk minimisation. Put more broadly, the systems approach attempts to apply the "scientific method" to complex marketing problems studied as a whole; it seeks to discipline marketing.

But disciplining marketing is no easy matter. Marketing must be perceived as a process rather than as a series of isolated, discreet actions; competitors must be viewed as components of each marketer's own system. The process must also be comprehended as involving a flow and counter-flow of information and behaviour between marketers and customers. Some years ago, Marion Harper, Jr., now chairman of the Interpublic Group of Companies, Inc., referred to the flow of information in marketing communications as the cycle of "Listen (i.e. marketing research), publish (messages, media), listen (more marketing researc), revise publish, lisetn..." More recently, Raymond A. Bauer refferred to the "Transactional" nature of communications as a factor in the motivations, frames of reference, needs, and so forth of recipients of messages. The desires of the communicator alone are but part of the picture.2/

1/ from "Harvard Business Review" May-June-1967

Pushing this new awareness of the intricacies of marketing communications still further, Theodore Levitt identified the interactions between five different forces source effect (i.e., the reputation or credibility of the sponsor of the message), sleeper effect (the declining influence of source credibility with ~~the passage of time~~), message effect (the character and quality of the message), communicator effect (the impact of the transmitter - e.g. a salesman), and audience effect (the competence and responsibility of the audience). Casting a still broader net are efforts to model the entire purchasing process and perhaps the ultimate application of the systems concept is attempts to make mathematical models of the entire marketing process.

Mounting recognition of the almost countless elements involved in marketing and of the mind-boggling complexity of their interactions is a wholesome (though painful) experience. Nevertheless, I believe we must not ignore other ramifications of the systems approach which are qualitative in nature. For the world of marketing offers a vast panorma of non-or part-mathematical systems and opportunites to apply systems thinking. We must not become so bedazzled by the brouhaha of the operations research experts as to lose sight of the larger picture.

REFERENCES

1. See Glen McDaniel, "The Meaning of the Systems movement to the Acceleration and Direction of the American Economy," in Proceedings of the 1964 systems Engineering Conference (New Yourk, Clapp & Poliak, Inc. 1964(p.1; see also E.S.. Quade, editor, Analysis for Military Decisions (Santa Monica, California, the RAND Corporation, 1964), p.6.
2. Quade, op.cit., p.4.
3. " Communications as a Transaction " Public Opinion Quarterly, Spring 1963, p.83
4. See Theodore Levitt, Industrial Purchasing Behavior (Boston, Division of Research, Harvard Business School, 1965) p.25ff.

...

IV SYSTEMATIC TRAINING IN TEN STEPS 1/

1. Identify the training needs and priorties

(I) For which occupations will planned training be required.

(a) because of current weaknesses?

(b) How many people will need training for these occupations?

(III) Decide Priorities

(a) What are the most critical areas?

(b) Where will palanned training bring the biggest and/or the quickest return,

(c) What resources/constraints will affect these decisions?

2. EXAMINE THE OCCUPATION CHOSEN AS PRIORITY

Is it, in fact, necessary or can the whole system profitably be recorganised to obviate its necessity?

3. ANALYSE THE OCCUPATION. PREPARE:

(I) Job description

(II) Job specification and, if necessary

(III) Further analyses of skills, knowledge and possibly attitudes, in order to identify areas of difficulty which will thus affect the choice of what must be learned and of appropriate training techniques.

4. SPECIFY, SELECT AND APPRAISE THE PEOPLE TO BE TRAINED (that is, determine the target population for whom training will be intended)

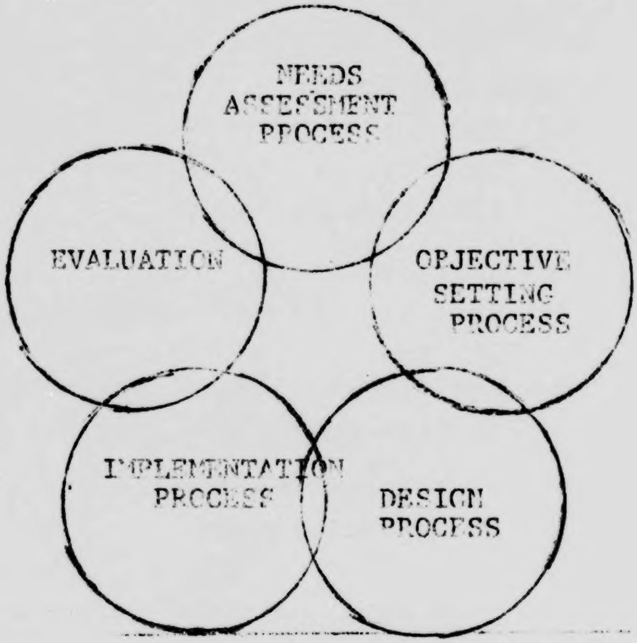
(i) What aptitudes /personal traits are required (noted on the personnel specification)?

(ii) Will we have to recruit and/or retrain present employees?

1/ from an appendix to "A Guide to the Identification of Training Needs". BACIE, October 1971.

CONCEPTION OF THE TRAINING MODEL AS AN INTEGRATED PROCESS[1]

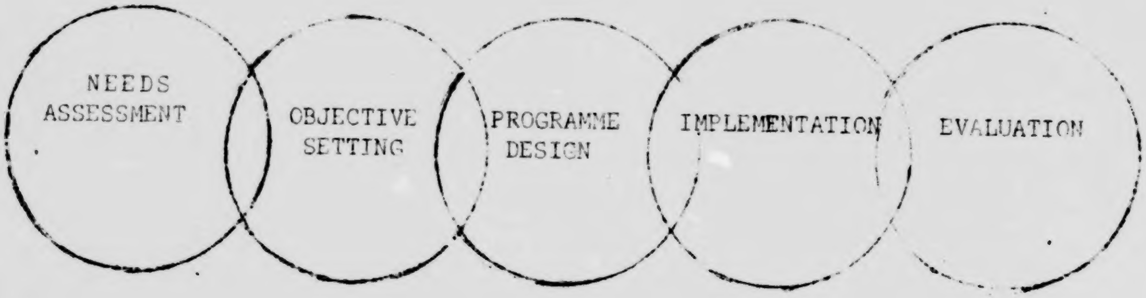
FIGURE 2


NEEDS ASSESSMENT PROCESS
OBJECTIVE SETTING PROCESS
DESIGN PROCESS
IMPLEMENTATION PROCESS
EVALUATION

---

[1] From the ILO MAN DEV Manual No. 36, Geneva, 1972

FIGURE 3 THE TRADITIONAL CONCEPTION OF THE TRAINING MODEL


NEEDS ASSESSMENT
OBJECTIVE SETTING
PROGRAMME DESIGN
IMPLEMENTATION
EVALUATION

(III) Which of the specified skills, knowledge (and, possibly, attitudes) do the target population already possess? (When compared with the job specification this will give the "training gap" or training specification).

5. SET THE TRAINING OBJECTIVES

What must the trainees be able to do, and to what standard, after the training? (this is known as the criterion behavour).

6. DRAW UP A SYLLABUS

The content required to fill the training gap in order to achieve the objectives.

7. PLAN THE TRAINING PROGRAMME

This gives the detailed tactics of training in order to ensure that the objectives will be achieved.

(I) In what sequence will learning take place?
(II) How will learning be caused?
(III) By whom will learning be caused?
(v) How long will be required for learning?
(vi) What resources are required? Do we possess these or can we obtain them?
What other constraints obtain?
The answers to point (vi) may mean reconsideration of steps 1,4, and 5 above.

8. IMPLEMENT THE TRAINING PROGRAMME

(that is, cause learning to take place)

9. CHECK THE TRAINING

(I) Has the training achieved its objectives?
(II) Were these objectives the right ones?
(III) Were the results worthwile? have they justified the costs?
(IV) In future, could the same results be achieved more economically/effectively by other means?

10. FOLLOW UP THE TRAINING

(i) Ensure that trained personnel put into practice what they have learned;

(ii) If they do not do so, or are not allowed to do so then identify further needs and return to step 1.

V TRAINING SYSTEMS 1/

A system is an arrangement of regularly interactin objects people or events which work together to perform one or more functions. A training system may be defined as the organisational priciple by which a training operation may be developed. The training administrator must select a system or combination of systems by which he can achieve his goal. For Example: suppose the need is to produce a cadre of Computer operators. The traing administrator must make a decision. The folowing are some of the approaches he might use.

1. Establish and equip a central school.
2. Arrange with computer users to take the responsibility and to conduct in-service training.
3. Establish an apprentice programme.
4. Organise a correspondence or home-study programme.
5. Organise an approach that uses a combination of the four approaches mentioned above.

(a) THE SYSTEMS APPROACH

We know about systems as groups of things which function together: irrigation systems, the solar system, the nervous system. Such terms have been common for centuries. We also know that numerous systems for achieving various purposes have evolved since the Industrial Revolution. Most of these systems were combinations of existing machines, materials, and human resources. Sometimes these systems were put together rather haphazardly. The systems approach, however, is a great and far-reaching development of our age.

1/ Excerpts of Chapter 3 of "Training Methods for skill Acquisition".

It is a set of principles which emphasise clear definition of objectives and specific design and refinement of the means of achieving the objectives. The resulting system is maximally effective and efficient; it is especially effective for organising training programmes.

One viewpoint about how to apply the Systems Approach to training appears in Dr. Harold Moon's The Systems Approach to training and Programmed Instrucion. This book provides the basis of the following discussion.

Dr. Moon contends that training has only one legitimate purpose; to assist in achieving organisational goal by obtaining maximum job performance at the lowest possible cost. Those who do not keep this purpose of training clearly in min tend to indulge in fads which have no clearly defined objectives. Even when the goals are fairly clear, partiallly ineffective or inefficient training methods are often chosen. In all such cases, time and money are wasted.

The Systems Approach to training has proved to be a valuable means of determining valid training objectives and subject matter and an aid in selecting and devising effective instruction. It can minimise failure and maximise success.

The basic approach consists of four major phases: Analysis, Design, Developemtnt Evaluation. However, the Specific processes vary in each phase depending upon the kind of system to be established.

As adapted for the solution of training problems, this model of the systems Approach consists of five major phases:

1. Definition of the Input, Output and Subject Matter.
2. Identification of the Operating Conditions &Constraints.
3. Design & Production of the Compenents.
4. Evaluation & Refinement of the System.
5. Operational Monitoring of the Output of Quality Control.

The next pages give a brief, general description of each phase, its processes and products.

The INPUT of a training system is the untrained person.

The OUTPUT is the trained person. SUBJECT MATTER is everything the trainee must learn.

INPUT SUBJECT MATTER OUTPUT

The INPUT is defined by stating the characteristics of the trainees. This includes age, sex, basic skills, prior knowledge of the subject matter, aptitudes, levels of education, motivation, attitudes toward training and toward using what they learn. If this information is not readily available, it is obtained by testing or interviewing or specified as the criteria for the selection of trainees.

THE OUTPUT is defined by stating precisely (1) what the trainees must be able to do upon completion of the training (2) the levels of proficiency desired, and (3) the conditions under which the trained behaviour must be demonstrated. These specifications are derived from the requirements of the job to be performed.

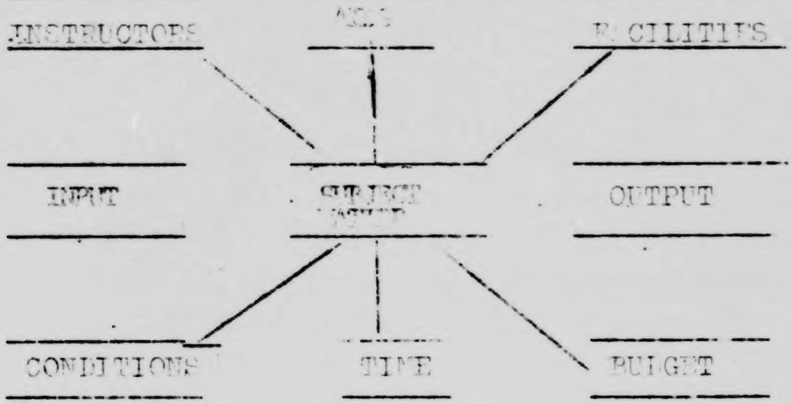
Job requirements include not only the behaviour necessary to complete tasks, but the job standards (the required proficiencies). If this information is not already available, it is obtained by task analysis.

THE OUT-PUT of a training system comprises the training objectives. These training objectives, in addition to being directly job-related, allow precise determination of course subject matter and the development of job-related tests. The value of such tests accrues to the learner (he sees that he is making progress toward behaviours his organisation can use), and the trainer (he sees that his system is working toward the desired OUTPUT).

...

Before the components of a feasible training system can be designed, the conditions under which the system must operate and the constraints (limitations) of the design must be known.

FIGURE 4: SYSTEMS APPROACH MODEL


INSTRUCTORS
AIDS
FACILITIES
INPUT
SUBJECT MATTER
OUTPUT
CONDITIONS
TIME
BUDGET

To identify the operating Conditons, one answers such questions as:

1. How much time is available for study each day?
2. Will study be:
    - At scattered geographic locations?
    - At a central location?
    - In a supervised group?
    - With instructors available?
    - At work stations?
    - At home?
    - On idle time between job tasks?
    - On released time?
    - On overtime?
    - On their own time?
3. Will the training be mandatory or optional?
4. Will the trainees buy or be given their materials?

Constraints on the design of the system are identified by seeking answers to questions such as:

1. What kinds of training facilities are available?
2. What kinds and numbers of instructors are available?
3. What training aids are available? (or can be made available?)
4. What is the overall time limit for training?
5. What are the administrative conditions?
6. What is the training budget?

A training system receives an untrained person (INPUT) and modifies his behaviour to match that specified in the training objectives (OUTPUT). This must be done under the operating conditions and within the constraints. Consequently, the system designer must consider operating conditions and constraints when deciding:

1. Order of the subject matter within the total system, within course, and within lessons.
2. Method(s) of Instruction: lecture, laboratory, correspondence, programmed instruction, conference, seminar, demonstration, role-playing.
3. Format(s): Texts, workbooks, manuals, audio/andor/visuals, instructor guides.
4. Training Aids: audio and/or visual devices, job simulators, laboratory kits. If an Instructor is

to function as part of the system he may be considered as a component. Instructor components are "designed" by specifying precisely how they will behave in the system. These specifications can be used for the selection of instructors or as objectives for their production through train-the-trainer programmes.

Needless to say, the system is throughly tested before the system design is considered complete. Typical trainees work their way through the entire learning system, they complete all the lessons and use all the materials and aids.

They test themselves (or are tested by the designers) to see that their behaviour equals the output defined in the objectives. When the learners' behaviours do not equal the desired output, the system is modified.... and the testing process repeated.

The final test is a terminal criterion test. It is based on the total list of objectives, or OUTPUT of the complete system. Each section of this criterion test is keyed to appropriate lessons so that if the developmental students do not achieve the overall objectives, faults can be detected in specific lessons.

Quality Control can usually be maintained economically in a training system by using the same tests employed in evaluating and refining the system. However, in some cases, it may be desirable to shorten the diagnostic tests to facilitate administration.

The final criterion test should be "terminal" in the sence that it completely covers the OUTPUT, and also includes as much actual or simulated job performance as is feasible. Without this performance (and the environment of the workplace itself) the test lacks validity. As an ongoing check of the effectiveness of the system, the results of frequent job performance evaluations should be fed back to people who hold training responsibilities. This data is valuable in further refining the system. Also, change in job tasks or standards can quickly be built into the training system, keeping it current for future trainees.

There are three types of tests in a training system:

1. The prerequisite test is used to assure that qualified trainees are selected as the INPUT.
2. Diagnostic (criterion) tests are used to assure that each trainee has achieved the objective of each lesson.
3. The Final Terminal Criterion test is used to check each trainee for his achievemnt of the total objective.

Failure on any test indicates trouble. Perhaps the quality of the instruction has dropped. Perhaps the trainees are not applying themselves. Perhaps errors took place in the trainee selection. Whatever the cause, investigation can be made and corrective measures taken when the testing is valid and continous. Such measurement is an integral part of a training system.

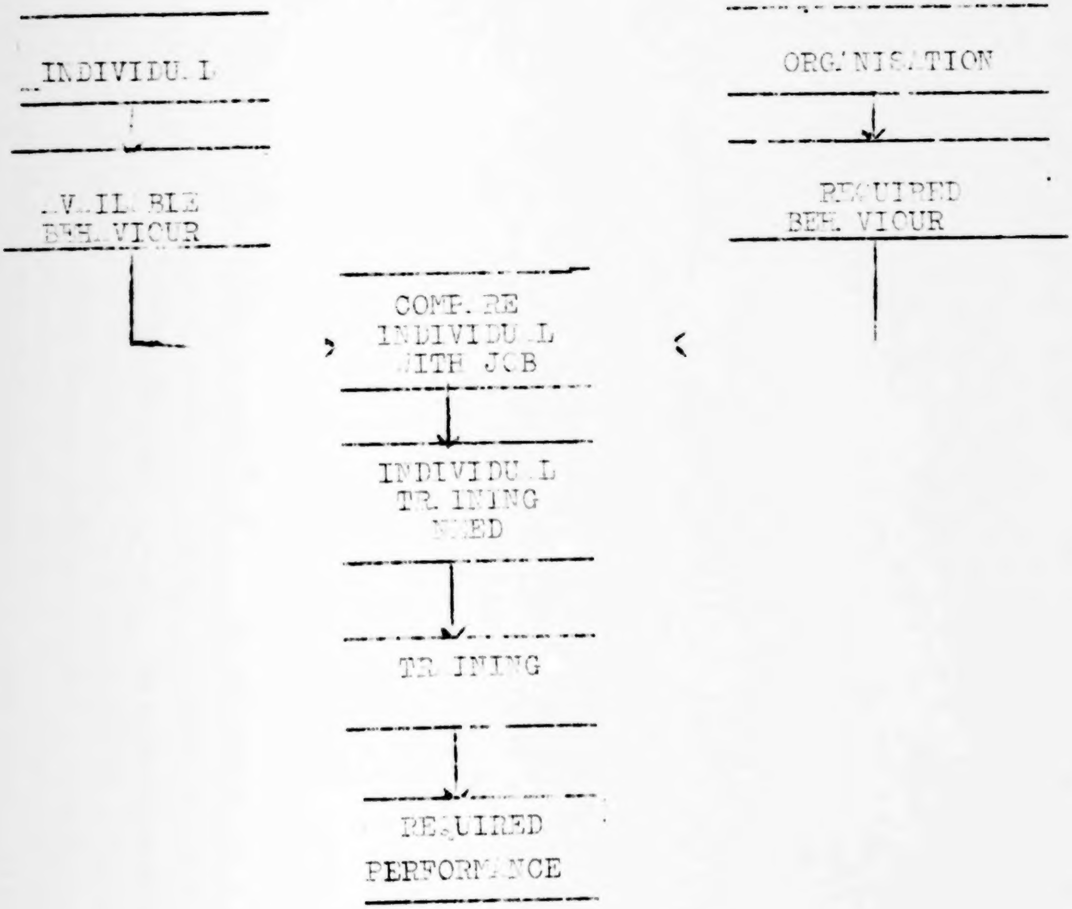
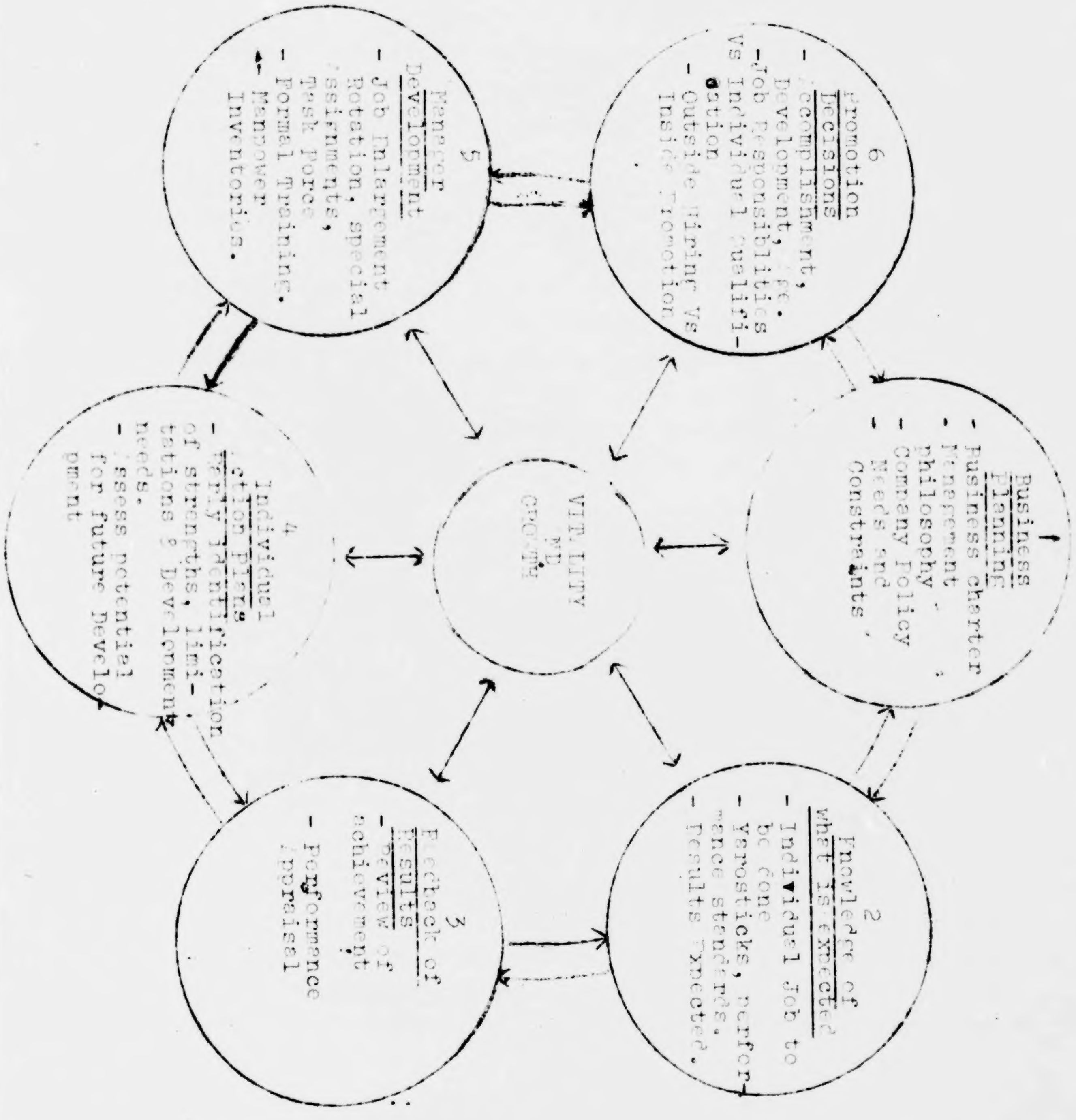

INDIVIDUAL
AVAILABLE BEHAVIOUR
ORGANISATION
REQUIRED BEHAVIOUR
COMPARE INDIVIDUAL WITH JOB
INDIVIDUAL TRAINING NEED
TRAINING
REQUIRED PERFORMANCE

FIGURE 5: SYSTEMS TRAINING

FIGUR 6: A SYSTEMS APPROACH TO DEVELOPING MANAGERIAL RESOURCES


VITALITY AND GROWTH
1 Business Planning
- Business charter
- Management philosophy
- Company Policy
- Needs and Constraints
2 Knowledge of what is expected
- Individual Job to be done
- Yardsticks, performance standards.
- Results Expected.
3 Feedback of Results
- Review of achievement
- Performance Appraisal
4 Individual Action Plans
- Early identification of strengths, limitations & Development needs.
- Assess potential for future Development
5 Manager Development
- Job Enlargement Rotation, special Assignments, Task Force
- Formal Training.
- Manpower Inventories.
6 Promotion Decisions
- Accomplishment, Development, Age.
- Job Responsibilities Vs Individual Qualification
- Outside Hiring Vs Inside Promotion

VI. TRAINING NEEDS ANALYSIS: Rationale & Approach.

(a) INTRODUCTION:- The Problem

A major dilemma facing the development efforts in Nigeria, as well as other developing countries of Africa, is the putative deficiency of qualified manpower - qualified not only in terms of professional and academic requiremtns but more in terms of performance meeting required standards,

One way in which this problem can be appreciated is to attempt an assessment of the process with wheih most business and governmental decisions and problems are respectively made and solved.

The development success of countries like U.S. Japan, and Canada, illustrates the fact that a great number of excellent managers and administrators with wonderful capabillities and techniques constitute the mainstay of high economic development and ceaseless innovation of knowledge and technology. These excellent managers and administrators evolve through conscious manpower training and development efforts available in these countries.

To improve manpower quality involve planned system of behaviour change. Behaviour change is an outcome of effective learning and Training is one popularly accepted process of promotion and easing necessary behaviour change. It is an effective tool available to help an organization to get from where it is to where it plans to be by ensuring that the human resources on which it depends have the necessary knowledge skills and attitutdes to perform their duties and responsibilities.

Training in most Nigerian organisations and government agencies is influenced by traditional and generalized human motives thus making staff development efforts irrelevant and consequently the solution of those performance inadequacies worrying well-meaning people remains obscure.

The concept of Training Needs Analysis de-emphasized the traditional and generalized human motives behind training. It transforms personnel training and career development from a "Solution-Centred" approach involving direction, prescription and bargaining to a "Problem-Centred" approach through which training is based on consultation and reflection on organizational and man-management problems.

The objectives of this presentation are : to

(i) share our experience with you in order to identify those traditional underlying pressures and tendencis which necessitate the rationale for employing Training Needs Analysis (TNA) as a basis for manpower training and career development.

(ii) Examine the concept of TNA.

(iii) Apply the four basic rules of praxeonomy to show the practical relevance of Training Needs Analysis (TNA).

(iv) Provide a systematic approach to TNA adn

(v) relate TNA to systems approach to Training.

(b) RATIONAL FOR TNA

In a recent research conducted by the Training Division of ABC Management Group into the Systems of Training in some selected companies and para-statal organizations in Lagos area, it was discovered that most employees are sent on training programmes either in-house or external, for various reasons. These reasons are more of internal organizational pressures and personal tendencies rather than real performance needs.

Our discoveries were further reinforced by the attempt to prove why employees still behave in their old traditional ways inspite of their exposures to training in Nigeria as well as in Overseas.

Though the research highlighted the considerable problems facing implementation and evaluation of training efforts, it conclusively revealed that the foundation for most training efforts was faulty- that is, the policy objectives for training were not properly - conceived. (Where they were clarified, there human resource devlopment needs).

From the result of our analysis, the organizational pressures and human tendencies influencing training were identified as follows:-

(1) That Training in most Organizations is by precept.

In most cases employees are required by authoritative order to be trained, and therefore every manger regards it imperative to satisfy these authoritative policies and practices. Training therefore has little or no relationship, with performance requirement.

(2) Training is provided for in most departments to offset intra-organiaational jealousy syndrome.

This is an internal pressure on superiors to send subordinates on one form of training or the other because of precidente. If Mr.X had been, it is mandatory that I too should go. This is training precipitated by human imitative tendency.

(3) Training is used in most organizaions as a paternal reward and punishment measure.

This is where managers provide training either as a reward for the their most loved staff or as a punishment to get rid of the most undesirable elements temporarily or permanently.

In most cases those termed undesirable were good performers who were only dissatisfied with their superiors managerial style.

(c) Case Extract:

A sectional manager in a medium-sized textile company responsible for personnel recruitment and training, was unhappy with his boss the chief personnel manger over his interference with his recruitment procedures. The sectional Manager had on many occasions challenged his boss and even threatened to expose him if this pressure did not stop. He was later recommended to go on a one month management course, while on the course the Chief Personnel Officer reorganized the department, and placed another officer he could better manipulate in his place.

This shows how training is often a means of fulfilling the personnal tendencies of superior officers.

(4) Most organizaions engage in training to Satisfy corporate image

The establishment of the Industrial Training Fund and membership of many organizations in NECA - Nigerian Employers Consultative Association - put some pressure on organizaions to train. These organizations, apart form the pressures from these agencies, like, not only to imitate other organizations but, to show that they too engage in staff development. This is a situation in which training is used to meet corporate image syndrome rather than real needs.

(5) Training, where precipitated by personal request is often a way to achieve job abdication tendency.

Some staff negotiate training for themselves as an opportunity to get away form a punishing work situation.

(6) Training is generally assumed as a step towards promotion and higher pay

A genrally accepted expectation of most staff sent on training is to come back and assume high responsiblities with corresponding remuneration. These people regard promotion as immediate outcome of training.

(d) Case Extract

An administrative officer in a well-known company importing and selling mainly Japanese vehicles in Lagos learnt reliably that the company was planning to set up a staff Devlopment department. This administrative officer further investigated the grade level intended for the head of the new department. He learnt that this was about two or three steps higher than his present level. So he decided to pressure the Administrative Manager to send him on a six week Training of Trainers Workshop recently advertised. He was sent on the course but few weeks after his return he learnt to his disappointment the decision of the company to shelve the plan indefinitely. The officer is now with another organization.

This example illustrates the use of personal ambiton to negotiate training without relating the effort to well planned corporate needs.

(7) Training, in majority of cases, is used as a means to immediate self enrichment

A fascinating case situation revealed that quite a great number of employees particularly in government, regard training as a means to earn additonal money. In fact majority lobby to go on overseas training not minding its relevance but to earn the lucrative allowance.

In a particular case analysis of training cost it was discovered that the allowance paid to a particular trainee on a two week course was more than four times the cost of the tuition. More than four times the cost of the tuition. More importantly the organization could have spent the same amount to train, in house more than six people for the same period and the training would have been more relevant to organization and personal performance needs.

(e) Consequences of Lack of TNA

When training efforts are precipitated by any of the various circumstances described above it leads us to one basic concluion that Training policy is an act of erratic behaviour carried only by the whim and caprice of the person who has the authoritative power to decide who should go on what training.

The consequences of this situation include among others:-

- a gradual development of suspicious environment for training.
- unsystematic manpower planning
- perpetuation of performance inefficiency
- training gradually became a threat to the status quo
- whatever training that takes place is of no practical value since individuals expectations are viewed with suspicion and not channelled to constructive ends.
- organizational in a sense top management insensitivity & resistance to change, and nothing kills an organization faster then the lack of creative adjustment.

THE TNA

From an analysis of what training means one can see the essense of training needs Identification.

TRAINING CAN BE REGARDED AS THE PROCESS OF DEVELOPING AN INDIVIDUAL IN ORDER TO INCREASE HIS PERFORMANCE STANDARD WITHIN A GIVEN JOB, OCCUPATION, TRADE OR PROFESSION. THIS MEANS PROVIDING A PERSON WITH THE NECESSARY KNOWLEDGE, SKILLS AND ATTITUDES HE REQUIRES TO PERFORM A JOB ADEQUATELY.

This implies training a manager for example is not only to produce a better trained, more skilled, more perceptice manager but importantly.

" to maximize management performance & efficiency to meet the overall short and long term objectives and goals of the Organizaion.

The focus of TRAINING NEEDS ANALYSIS IS:-

Sorting out performance discrepancy
that training can correct.

TNA therefore asks one basic question?
HOW DO YOU KNOW TRAINING IS REQUIRED ?

There are four ways that easily come to mind:

(1) when a person is given a new job to perform

(2) When a person is to use a new technology-
mechanical or procedural

(3) When a person shows an ovious result of inadequate or unsatisfactory performance e.g.- failure to meet set objective.

  - Complainst from customers, colleagues etc.
  - breakdown
  - wastages
  - accidents
  - conflicts
  - financial loss etc.

(4) When a person shows noticeable potential or performance strengths.

The Four show that although the employee is the target for training, training needs may appear in any of the following levels:-

1. Organizaional:- Here the attempt is to examine the total performance of the organizaion and identify where in the organization is training most needed to solve genral weaknesses i.e. in what department or section are we having trouble.

2. Occupational:- At this level the attempt is to find out the knowledge, skills and attitude required to carry out the various duties related to a specific job description e.g. Project Manager

3. Individual- This is the real human or individual level where one determines who i.e. - Mr. Ojo or Miss William, needs training and in what?

TABLE 1. THREE LEVELS OF TRAINING

Level of training needs	Main Question to be answered	Typical conclusions/ recommendations	Process refer to as:
Organisational	Where is training most needs? i.e. in which department or section? or for which occupational group?	1.The most urgent need is in the cold-rolling department, or 2.the most urgent need is for clerical training throughout the organization or 3.successors for Managers A,B and C must be trained before the latter retire in twelve months' time.	Identification of Training Needs Step No 1*
Occupational	what skills/ knowledge/ attitudes are required for a particular occupation?	Skills/Knowledge/ attitudes required .... (usually written job specification)	Job Analysis step No 3*
Individual	which individuals require training to attain which particular skills/knowledge/attitudues?	1.(a) Henry Roberts, cold roller, needs training in faults recognition and correction. (b) Joseph Brown & Richard Jones. assistant cold rollers, need training in safe-lifting procedures or 2. All new clerical entrants will require train-	Assessment Step No 4* (also 9 & 10)

Level of trainig needs	Main Questions to be answered	Typical Conclusions recommendation	Process refer to as:
		3(a) David Henderson requires training in .... to succeed Manager A. (b) James Richards requires training in .... to succed Manager B. (c) A replacement for Manger C will have to be recruited externally.	

TABLE 2:. IDENTIFICATION OF PERFORMANCE DISCREPANCY FOR TRAINING PURPOSE

Indicators of the Need for a planned Staff Development programme (Training	Symptoms, or How Problems that lead to the Need for Training are sensed.	Approaches to performance discrepancy analysis and need identification	
	General	General Approaches	
Whenever the following occur or anticipated changes - political Policy Localization Indigenization Africanization - Administrative Centralization Vs decentralisation - Technology equipment process innovation or new development	Complaints- by the Public Clients Customers Failure to meet date lines, and contracts, Lateness Absenteeism High Staff Turn-over Accident rates	Organizational Analysis Find out the extent to which: - Goals and objectives are stated & precise - Policy is articulated and clear - Organization structure is easy or cumbersome, or unnecessarily complex. - Communication channels exist and are easy, or unnecessarily cumbersome. - Functional relationship between units & key individuals within, is amicable, or strained.	Staff and Job Analysis Locate - Job description Job specification determine - Work content, & scope - Working conditions and environment - Standards & levels. of performance (a) Task analysis (b) Performance Analysis (c) Record analysis, by reviewing

Indicators of the Need for a planned Staff Development Programme (Training)	Symptoms, or How Problems that lead to the Need for Training are sensed	Approaches to performance discrepancy analysis and need identification	
- Products - Service Retirements Transfers New intakes Procedures, Products Policies etc.	Wastages Breakages Equipment Idleness Low quality production and/or high rejects. Low staff morale.	- Staff records are well kept & exist. - Methods and Procedures are stated, Genral Orders, Financial Instructions or records	- staff appraisal records - Job specification and training records Equipment analysis. (she/he may be using the wrong equipment).
Expansions Geographical -to other Sistes	Over-spending Misappropriation Corruption	- Performance standards are articulated.	
Physical - size Diversification Instead of one product, several others come in. Instead of one service, several other Services.	Specific requests for courses,) transfers) leave) Typographical errors	Specific Approaches Perform Critical Incidnet analysis - Observe and study critical areas. Conduct Problem census sessions & conferences, Review suggestion box notes or comments. Conduct brainstorming sessions. Conduct surveys - Custome, client,	

Indicators of the Need for a planned staff Development Programme (Training)	Symptoms, or How Problems that lead to the need for Training are (sensed)	Problem Identification - approaches and analysis
Reforms They lead to obsolescence in skills, knowledge & outlook etc.	Rudeness & discourtesy	Worker, etc. Review staff records - reports and appraisal forms Interview - Management to get a charification of what is expected of the staff, i.e. ascertain existence of standard performance criteria, & his current performance level
-they serve as useful indicators for the need to prepare a comprehensive staff training & development:	Indiscipline etc. If these are not atteneded to, they will lead to: - High operational costs, losses, low productivity, strikes, disenchantments, unemployment, etc.	- Colleagues to find out how they see him perform; or else his poor performance could be due to his being ostracized, or his desire not to break group forms.
-Policy, and legal framework, - Organizational set up, - Programmes; and therefore lead to systematic training rather than training by crisis.	- and if losses continue without fulfilment of organization profit motive, the organization could wind up. - If disenchantment, & unpopularity continues, organisations, or Governments, become vulnerable to revolutions & consequently downfall	The difference between expected performance and current performance constitute a deficiency, which could: either (a) Arise from administrative or executive deficiency, or (b) from lack of knowledge, skills, attitude or experience determine whether individual or group needs. If (a) the following action could be taken. - organization restruring job enrichment, or work simplification - Improvement of working conditions communication channels etc. (b) appropriate training is necessary. decide whether - at home in his own town - at central location - at work sites/stati - during idel times o working time - external or interna

Indicators of the Need for a planned Staff Development Programme (Training)	Symptoms, or How problems that lead to the need for Training are (sensed)	Problem Identification - approaches & analysis
		OR ORGANIZATIONAL DEVELOPMENT sessions and programmes. __NB__ Training activities are undertaken in response to needs arising from unsatisfactory job performance - which may arise from (a) Deficiencies in administrative or executive ability, (b) Deficiencies in job knowledge, skill, attitude or experience level. Training is therefore undertaken to produce required (a) Job performance level, (b) Job satisfaction, (c) Organizational efficiency, and realization of desired objectives.

FURTHER REFERENCES:

1. T.H. Boydel: (i) A Guide to Analysis (BACIE 1970)
(ii) A Guide to the Identification of Training needs BACIE 1971)

2. E. Singer & J.Ramsden: The Practical Approach to Skills Analysis, McGraw Hill 1969

3. Craig Robert L. and Bittel Lester R. (Editors) Training & Development Handbook (American Society for Training and Development)

(McGraw Hill)

TRAINING ADMINISTRATION

- **Role of the Trainer**
- **Role of the Line Manager**

I. RESPONSIBILITIES OF THE LINE SUPERVISOR FOR TRAINING

The line supervisor's main responsibilities with regard to training, guided and assisted by the Training Unit, may be summarised as follows:-

- determining training needs
- deciding the type of training required
- assisting in the training
- evaluating results of training

He should also bear in mind that TRAINING IS NOT THE ONLY ANSWER (the problem may be better dealt with by, for example, methods study, organisation change, job rotation, organisation development, change in recruitment policy etc.) Equally TRAINING IS ONLY THE ANSWER IF IT IS EFFECTIVE. Below is listed what needs to be considered at each stage:-

A. DETERMINING TRAINING NEEDS

(i) to identify broad training needs to enable the Company training programmes to be planned (i.e. the difference, present and potential, between the job performance standards required and the skills and knowledge presently shown by subordinates).

(ii) to identify specifically those individuals who require training, to determine the degree of skills and knowlege to be met by such training, and to translate these into training objectives written is performance terms.

B. DECIDING THE TYPE OF TRAINING REQUIRED

(i) To decide, on the basis of the training objectives specified, what type of training (on-the-job, formal etc.), or what combination is most appropriate, and to draw up a training programme to meet these objectives.

(ii) to nominate the subordinate for any formal training which forms part of this programme.

(iii) to discuss the training needed and the programme drawn up with the subordinate, making clear the reasons why it is needed and what it is hoped he will gain from the training. The subordinate himself may have views to offer and may suggest improvements or amendments to the programme. The line supervisor's support of, and assistance in, this training should be clearly indicated,

C. ASSISTING IN THE TRAINING

(1) Formal Training:

(i) on completion of the course, to discuss it with the subordinate and identify what he has learnt and what training was ineffective.

(ii) to provide feedback to the Training Unit on the effectiveness of the course.

(iii) to plan how to follow-up those areas of ineffective training

(iv) to plan, encourage and assist the subordinate to implement what he has learnt into his job, bearing in mind too much should not be expected in the early stages.

(v) to assist the Training Unit where appropriate in lecturing to courses.

(2) On-the-job Training

(i) to identify clearly who is to supervise the training and ensure he will have sufficient time to give the guidance.

(ii) if the training supervisor is to be yourself, set aside a regular and adequate time for this; if the training is delegated, set aside some regular time to discuss progress with the subordinate.

(iii) plan, encourage and assist the subordinate to implement what he has learnt into his job bearing in mind too much should not be expected in the early stages.

D. EVALUATING RESULTS OF TRAINING

(i) to check and test the results of training given against the specified objectives, identify those areas not achieved and establish why. Check for other benefits gained which were not originally intended.

(ii) to advise the Training Unit about the results. and suggest any improvements or amendments.

II. ROLE OF THE TRAINING UNIT

A. to assist management and other line supervisors in the formulating of training policy, the assessment of training needs, the choice of appropriate training methods and evaluation of results.

B. to provide management with a means of controlling training expenditure and the evaluation of results achieved.

C. to act as a coordinating point for all matters of training and to keep management informed.

D. to plan,conduct and administer formal Company training courses.

E. to advise on the use of non-company courses and administer staff attending.

F. to undertake public relations commitments in the training field on behalf of the Company.

G. to maintain a professional competence through contacts with external organisation and through keeping abreast of developments in the training and educational fields.

INSTRUCTIONAL TECHNO

III. FUNCTION, ROLE AND DEVELOPMENT OF STAFF DEVELOP

Goals:	- To initia develop a
	- To provid discussio
Objective	- To identi (or Train
	- To derive
	- To indica
Approach and Method	- Through i the many
	- and areas
Materials & Environmental Setting	- Blackboar surface,
	- instructo
Development	- Participa they have and then
	- Participa of a trai integrate
	- Participa as to dev

OGY WORKSHOPS
NT (OR TRAINING) OFFICERS

e a concern for professional competency, and consequently
motivation for professional growth, training & development.

an opportunity for examining process of conducting group
.

y and list the functions and role of Staff Development
ng) Officers.
and list desirable competencies, and consequently
e suggestive topical/curricula areas of study

dividual and group assignment, to discuss & conclude on
unctions, competencies.

of study required of the trainer.

and chalk: flip chart and markers, or any other writing
en and paper for participants.
's handout.

ts invited to reflect individually for a while, about how
seen their task as trainners then list first the functions
he necessary competencies.

ts invited to compare their perception of the role & funcit
er as they see it with those of four others, and finally
their views of the function and role as the group sees it.

ts invited to compare the group perception with other group
lopment the workshop participant perception.

- Participant invited to reflect on their perception

Function and Role	Required Competencies
Instructional Technologist	- The ability to design and in instructional system - The ability to select and us of instructional methods - The ability to select and us of instructional media and - The ability to design and pr instructor made material - The ability to create a tea environment & facilitate lea minimum effort. - The ability to prepare and - The ability to diagnose, con a teaching learning impedim - The ability to identify and micro-activities of instruct learner involvement and part - The ability to deploy learne as and when the situation, le and Media demands. - The ability to organise and flow of information or ideas their easy acquisition.

n the light of the instructors perception hand out

	Curricula/Topical area study for developing the competencies
plemtnent and	- Basis and application of learning theory.
e a variety	- National, application and use of the various methods of instruction
e a variety terials.	- Professional language & terms of distinctive delineation between Methods, media & Materials, etc.
oduce	- Design and production of teacher made materials
ning/learning rning at	- Operation of instructional equipment.
se lesson plans	- Basis and application of Reinforcement and Cybernetics theory
front and solve nt	- Design and utilization of lesson plans
use a variety of ing for active cipation.	- Derivation and specification of behavioural instructional objectives
rs effectively son or methods	- Programmed instrucion-theory and practice.
sequence the to facilitate	- Toward a prescriptive theory of teaching or instructing.

Function and Role	Required Competencie
Consultant - Problem solver change agent	Ability to plan, i and direct change - Ability to analyse - Ability to interve intervention in ti - Ability to accurat provide inclusive situation - Ability to help in - Ability to express natives - Ability to provide reality - Ability to confron - Ability to reinfor - Ability to reduce manageable units - Ability to use & e ation's resources - Ability to generat al climate recepti - Ability to sense o climate - Ability to solicit desire help withou dependency.

	Curricula/Topical area study for developing the competencies
itiate, sustain	- Diagnostic & analytic skills
a dilema.	- Techniques & methods of intervention and refraining
e refrain from e	- Dynamics & mechanism of planning, sustaining & controlling change momentum
ly perceive and erspective a	- Sensitivity training interpersonal skills development.
defining goals	- Communication - theory and practice
& test alter-	- Performance analysis
a sense of	- Problem solving-approaches & techniques
sensitive areas	- Perceptive insight and initiatives approaches to problem/dilema analysis.
e commitments problem into	- Group dynamics and conflict solution.
and organiz-	- Nature of resistance, resentment and obstructionism to change
	- Basis theory and application of feedback
an organization-	- Persuasive skills
e to change ganizational	- Techniques & process of accelerating and slowing change momentum
& stimulate creating	- Techniques & process of directive & non directive consultation

Function and Role	Required Competencies	Curricula/Topical area study for developing the competencies
Counsellor	- Ability to seek & clarify information - Ability to synthesize the information and establish its validity and reality - Ability to provide information & act as a communications link in the organization. - Ability to establish access to those working on training & will participate. - Ability to establish trust between self and those concerned. - Ability to keep goals clear, express thoughts & ideas precisely. - bility to listen, reflect and ask appropriate questions. - Ability to locate resources and alternatives.	- Organizational goals & expectations - Individual goals and expectations - Creating common understanding of objectives, goals &/Or problems - Communication theory and practice - Listening skills - Basis and application of counsellin theory - Perception.

would appear that the development of a trainer would require an input of four major topical area ponents, each aimed at providing him with necessary information as a basis for developing the necessary mpetencies. They move form the instructional technologist-counsellor programme administrator programmer rarchy building up to the consultancy components.

17. NOTES WRITTEN FOR THE MOST COMPLICATED [illegible] RESIDENTIAL ONES - AND FOR SHORTER NON-RESIDENTIAL COURSES (NOT ALL OF THE ASPECTS WILL APPLY)

"If you have prepared effectively and thoroughly, your courses should run smoothly. An efficiently run course is 80% preparation and 20% on the spot inspiration and adaptability."

	Check List	
Establishing the Atmosphere		: The right academic and social atmosphere will make the difference between complete success and near success
Reception		: members should be met, welcomed and introduced to each other prior to your session
Informality		: get complete informality if at all possible
Course and Members' Needs		: during a course you may find certain internal pressures building up in the group with strong sub-groups or certain individuals may appear out of things because of shyness, resistance, etc. watch this very carefully and iron out if at all possible
		: stronger members of your group may help these personal or group tensions can destroy any atmosphere that has been built up
The Programme		: be prepared to rearrange the programme if need demand it to suit the group or course members who may want more activity, or vary especially if you have had a dull, listless day and it needs revitalising
Activity Sessions		: all these sessions need careful planning in considerable detail (see attached notes). Notes can be used by tutors and discussion group leaders as timetables
"Volunteers"		: generally better to detail people off, as volunteering wastes time some never get the chance
		: give every member a go
		: brief them in advance very carefully

	Check List	
Free Time		: afternoons are good free periods if sport and open air is available
		: do not organise free time - let them sleep, read or do anything they wish
		: free evening time can develop into boozy session, 'all right in moderation
Badges		: necessary if members do not know each other
		: also helps visitors to mix
		: tutors set example by always wearing theirs
Punctuality		: develop punctual habits for sessions and meals (to help the staff)
Visitors		: inform course who visitors are
		: do not have too many at one time
		: Visitors do not need special treatment, they are thereto work, after being introduced and welcomed.
		: they should never sit in on activity sessions
Work - The Room		: big enough to allow free movement around tables, etc. after it is laid out: if too big it is difficult to get & retain " intimacy"
		: minimum outside distraction
		: natural light by day, good lighting in evenings
		: for films, need blackout and electrical points
		: ventilation - always air room between sessions
		: watch central heating, not too much
		: get room with plain colurs and fabrics easy on eye
		: useful to have adjacent toilet
		: if possible, have small adjacent side room for gear & administraion, if not, keep well stacked in corner
		: lay out room to suit your purposes but allow room in speaker's area for him , chairman, visual aids & distance form audience
		: discussion rooms need to be big enough for eight to ten people (nearly all above things apply)

	Check List	
- Furniture		: Chairs comfortable without being luxurious: spares needed for visitors : rows of chairs without tables are not right: tables should be supplied for members to write and/or lean on: one or two spare tables useful. : Always have the room cleaned & aired daily : ashtrays & debris cleared after every sessio
- Stationery		: have all stationery laid out on table near entrance - paper (lined & unlined) -spare folders, ink - sharpened pencils-blotting paper - stapling machines-clips cellotape dispenser - hardboards with clips - REPLENISH FREQUENTLY
- Personal Folders		: these should be available with name and company of member plus course title, dates and location
- Lecture Notes		: issued after lecture, then put on stationer table for spare copies wanted &for visitors
- Hand-outs		: like case studies, etc., handed out when required & need to be collected
- Literature		: on display; changed daily or added to after lecture : need list to check who borrows books
Progress		: Course Tutors must be well enough in touch to sense course progress or otherwise should meet frequently and adjust things if necessary
Daily Programme		: good idea to list on newsprint board daily the coming day's programme
Expenses		: course members need to be very clear on their expenses position as being unsure can spoil their enjoyment of the course
Assessment Form		: helpful to have standard form requiring answers to be ticked and brief comments made: can be anonymous and need to be issued well before end of course and collected in time for summing-up
Danger points		: watch for slackening activity about 2/3rds or 4/5ths way through course and remedy it

	Check List	
Follow Up		: if you intend following up in any way, give members details at the end of the course
Photograph		: a good idea if done properly & mounted with names : arrange with local photographer for just before you break up
Administration		: looking at your programme you may require secretarial help-plan to get your secretary down
Organisation		: course members don't usually mind being ushered into sessions, etc. but handle with care
Hotel		: see separate check list for imperial Hotel.

IT IS VITAL THAT EVERY COURSE MEMBER SHOULD ENJOY THE COURSE. IF COURSE ADMINISTRATION (i.e. attention to even the smallest details) AND THE HOTEL ARE ABOVE CRITICISM, THEN COURSE MEMBERS CAN CONCENTRATE ALL THEIR ATTENTION ON THE COURSE ITSELF. IN THIS WAY THEY SHOULD ENJOY IT AND GET THE MAXIMUM BENEFIT FROM IT.

AFTER THE COURSE

Thank you letters		: get off as soon as possible to speakers (and attend to their expenses). and consider sending short personal notes to course members.
Hotel Bill		: insist on a detailed hotel bill and settle up as soon as possible; get a duplicate copy for your files if possible.

V NOTES ON PROGRAMME PLANNING

THESE NOTES ARE WRITTEN FOR THE MOST COMPLEX TYPE OF COURSE - A RESIDENTIAL COURSE - BUT NOT ALL THE ITEMS LISTED WILL APPLY TO NON-RESIDENTIAL SHORTER COURSES

" The true success of a training course lies in the detailed planning that precedes it."

	Check list	
Established the need		: must be run to meet the needs of line management and not as a pancea for ill-defined problems
Objective		: clearly stated objective essential & this should be prined on the programme
Length & type of Course		: depends on what you want to achieve, & what practical facilities there are for releasing people & running a course
Budget		: estimate overall cost & get approval for expenditure
Methods of training		: maximum participation is necessary adapt the method to the topic & the speaker using the one that will achieve the results you : want have a mixture of activity but not variety for variety's sake.
- Talks		: 30-15-60 minutes long followed by discussion : useful for putting over information and principles too many talks can lead to mental : indigestion remember problems of absorbing : information by just listening : also see below speakers
- Discussion Groups		: useful to tap course members experience : encourages group decisions rather than sum of individual decisions : needs clear statement of subject : Gives members practice in group leading and reporting.

	Check List	
-Projects		: useful for making members think about practical problems, to supply sblutions and extract basic principles : gives members practice in group leading and reporting : essential to have eventual reports submitted to expert who evaluates them : practical suggestions should be followed up
-Case Studies		: must highlight & be relevant to your course theme
-Role Playing		: must relate to course needs : preferably introduced late in course : very careful handling
-Incident Method		: variation on case study method, more alive : takes less time than case study : good course opener to stimulate thinking
-Practice Sessions		: make them get up & speak, write reports, train someone, etc. : criticism needs to be initially kid-gloved and always constructive.
- Visits		: planned well ahead : clear purpose of visit, i.e. look for specific things : try for end-of day discussion group with local managers : must highlight or sum up course themes : order well in advance : tutors must know films to lead discussion on them : equipment availability may mean having longish programme of films-still useful
- Filmstrips		: must suit course needs : good for group discussion leading and reporting practice : a visually presented short case study
- Reading		: used to give background information on subject not able to be covered wholly on course : needs to be very carefully selected and guided to suit intellectual level of members.

COURSE MANUAL FS. 3 - 3

TRAINING PROGRAMME DESIGN

A. TRAINING PROGRAMME DESIGN

I. " DESIGNING EDUCATIONAL AND TRAINING PROGRAMMES"

It is not an easy task to design a sound educational and training programme. The Educational designer has to consider a number of factors carefully before setting up his design.

First and foremost, he has to consider the goals to be achieved with his design.

What purposes is this design going to achieve?

In order to determine the purposes, the environment for which the programme is intended to serve should be analyzed and the needs, interests, problems and aspirations of the environment considered. For a programme to serve the society for which it is intended, the philosophy of the society must be determined. Philosophy deals with man's conception of this life and how it is to be lived. The philosophy of a people determines their values. Thus values become an important determinant of the goals of the design.

Very often, you hear in educational circles, the cultural bases of curriculum development. It is in the main the values of the society that are referred to the way people behave, the way they live their lives the occupations they engage in, the leisure they enjoy, their dresses, manner of greetings, burying the dead, worshipping and so on, constitute their culture. All these are considered in determining the goals of an educational programme.

When the goals have been determined, they are translated into behavioural objectives. "Behavioral objectives are statements of educational outcomes which can be measured or observed in the learner."[1] Curriculum designers concern themselves with objectives to help the teacher at the instructional level to understnand clearly what he wants to achieve as a result of his instruction.

---

[1] Acha F. Ndubisi Framework for Secondary Social Studies in Nigeria and its implications for Curriculum Design. "ED.D.Dissert". T.C. Columbia University - N.Y. 1973p. 28.

Before the objectives are finally passed as adequate, philosophical and psychological screening[2] is done to check for consistency, feasibility and attainability.

The next question in designing curriculum is, what educational opportunities can be provided that are likely to attain these purposes? At this stage of the design, the interaction between the learner and his environment is planned. The opportunities which are likely to lead to the achievement of the stated objectives are provided for the learner to experience.

Related to this step is the organization of the learning opportunities in such a way as to enhance adequate growth. Continuity, sequence and integration are taken into consideration in the organization. Certain objectives are repeated at different levels of education for greater internalization. This is continuity. In order to make for smooth growth, opportunities are planned in order of difficulty and logicality. This is in order to make for smooth growth, opportunities are planned in order of difficulty and logicality. This is sequence. Integration involves relating one learning opportunity to another in different areas of personal growth intellectual, physical, social, emotinal and moral.

The final step is Evaluation. The objectives of the design are evaluated to determine how successfully they have been achieved. Excellencies and deficiences are identified. This information is utilized to modify, revise, or strengthen the design.

In some programme management, three distinct facets of organizational programmes are identified, the in-put the process - and output. The designer sets up his design in such a way as to enable the organization to evaluate itself. Thus it becomes self-adaptive. It has a system of internal checks and balances.

---

[2] Ralph Tyler, Basic Principles of Curriculum and instruction. Chicago. The University of Chicago Press, 1950.

Stanley Young has suggested how an Organization can function as a total system.[3] The organization is designed to have an input analyzer, control, the process, the decision rule, the output-process identifier, which are integrated and monitored so that the management is knowledgeable about what happens in the organization. The Bureaucratic model of organizationis condemned. "Rather than visualize the organization in its traditional structural, bureaucratic, and hierarchical motif, with a fixed set of authority relationships much like scaffolding of a building, we are beginning to view organization as a set of flows, information, men, material and behavior."[4]

Rogers and Shoemaker did some studies on the merits and demerits of authoritative and participative approaches to organizational change and concluded that "The rate of adoption of authority innovation decisions is faster by the authoritative approach than by the participative approach but Changes brought about by the authoritative approach are more likely to be discontinued than those brought about by the participative approach."[5]

Comparing the Curriculum and Management designs, they have these things in common:

i. The purposes to be achieved by the design.

ii. The process to be undergone to achieve the purposes.

iii. The measurement of the results or output.

The Workshop for Management Educators and Trainers outlined the design of training programmes.

They include:

1. PHASES AND STEPS IN DESIGNING A TRAINING PROGRAMME:
   1. Choosing an overall strategy:
      (a) determining: basic approach, training strategy and training methods.

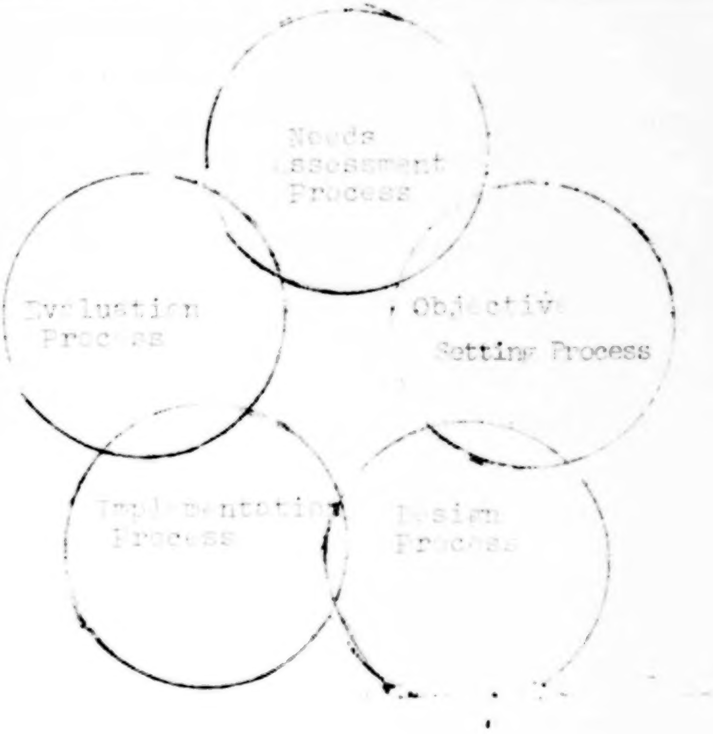
---

[3] Stanley Young. "Organization as a Total System", in Browder, Lesley H. (Jr.). Emerging Patterns of Administrative Accountablity. Berkely. McCutchan Publishing Corporation, 1971 pp.311-330

[4] Stanley Young. Ibid p.

[5] Everett M. Rogers and F.F. Shoemaker. Communication of innovations. A Cross- Cultural Approach. N.Y. Collier-MacMillan Ltd. London.

2. CONCEPT OF THE TRAINING MODEL AS AN INTEGRATED PROCESS


Needs Assessment Process
Objective Setting Process
Design Process
Implementation Process
Evaluation Process

Dynamic, Cyclical Process
having relationships and
integrated to one another

Systems approach to the design and perfecting of training programmes: System approach has three major elements:

(a) defining objectives in operational terms.

(b) seeking alternatives - spelling out and identifying different methods of meeting each objective. This "demands openmindedness, and readiness to discard preconceived motions".[6]

ii. CONVERTING THE OBJECTIVES INTO A PROGRAMME:

(b) drafting outline of program content.

(c) drafting curriculum with training events and their specifications.

c.1. Objective c.2 Content c.3. job functions and tasks c.4. Training methods c.5. time required c.6. faculty involved.

(d) estimating Time and Faculties required.

(e) establishing type of programme: e.1. package e.2. level

---

[6] John Pfeiffer. New Look At Education, Systems Analysis in our Schools and Colleges. New York. The Odyssey Press, 1968, p. 5

iii. MAKING THE WHOLE PROGRAMME AND THE LEARNING SITUATION CONSISTENT

(f) structuring training and learning sequences.
f.1. learning experiences f.2. training sequences
f.3. instructional units f.4. Content themes
f.5. Consistent events.

iv. COMPOSING THE DETAILED SYLLABUS:

(g) working out syllabus with g.1 alternates of stimulus and Reflection of involvemtne and Distance of Study and Practice of Individual and Group Events.
g.2. transitions g.3. procedures for current evaluation
g.4. provision for flexibility g.5. schedules and timetables.

v. Elaborating Programme Introduction:

(h) Evaluation: Full fledged analysis will attempt to evaluate a combination of alternatives by maximizing the benefits or utility to be obtained for a given cost, or by maximizing the price which must be paid to achieve specified changes. Both quantitative and qualitative factors are evaluate political implications, morale, motivation, job, satisfaction, etc. "Continual assessment involves sensitive feedback, cycles of evaluation which permit prompt readjustment of tactics to make sure that the system is moving toward its objectives - a kind of a steering by compass."[7]

3. PLACE OF DESIGN IN THE TRAINING PROGRAMME

The Training Management Cycle: Phases Activities

(1) in Planning:
1. analysis of the overall system.
2. identifying training needs.
3. defining the target population.
4. determining training objectives.

---

[7] Ibid p.6.

(ii) in Organizing: 5. establishing training content
6. selecting teaching methods.
7. designing the training programmes.
8. preparing the training activities.

(iii) in Implementing: 9. conducting the training programme.
10. conducting follow-up activities.

(iv) in Reviewing: 11. evaluating the training activities
12. revising the training programmes.

(v) in Feedback: 13. providing information for future planning.

(vi) in Information: 14. developing a training information system.[8]

II. IMPLEMENTATION OF PROGRAMME DESIGNS

Nothing is so disheartening as a strong opposition to implementing welldesigned programmes. Designers often under-estimate the power of opposition to their designs.

" It is one thing to design a sound curriculum; it is another to implement it. The designing and implementation of curriculum should, therefore, be perceived as two sides of a coin."[9]

When a design faces strong opposition, it is unlikely that it will be given a fair trial. The opposition will be so jaundiced that no stone will be left unturned to see that the design flops. Let us see attitude will be put on. When the design is worked down, "did I not forecast that", will be the general remark of the opposition.

---

[8] Centre for Management Development. A workshop for Management Educators and Trainers, Lagos, Nigeria, Part 1 8 July-16 Aug. 1974 pp: 5-67 -5-93.

[9] Aona F. Ndubisi. "Framework for Secondary Social Studies in Nigeria and its implications for Curriculum Design. "Ed.D. Dissertation Teachers College, Columbia University, N.Y. 1973, p. 129.

III. COMMUNICATION

One important problem which a designer should not overlook is how best to communicate to people on his innovation or design so as to be acceptable to them who will implemtnt it. People must be converted to your ideas before they can become your apostles.

Rogers and Shoemaker identified some models of Communication which should be of interest to curriculum designers.

1. The hypodermic needle model is a one step flow model in which the mass media carried messages to an audience with direct effects. "The model pictured the mass media as a giant hypodermic needle, picking and plunging at a passive audience."[12]

2. Two-Step flow model claims that ideas flow from sources to opinion leaders and from opinion leaders to their followers and the less active population.

3. The one-step flow model states, that mass media channels communicate directly to the audience, without message passing through opinion leaders.

4. The multi-step flow model suggests that there are a variable number of relays in the communication flow from a source to a large audience. Some members will obtain the message directly through channels from the source, while others may be several times removed from the message origin. The exact number of steps depends on the intent of the source, the availability of mass media and the extent of audience exposure, the nature of the message, the salience of the message to the receiving audience.

IV. WHY RESIST CHANGE?

People are usually more comfortable with what they are used to. The uncertainties surrounding change, the sufferings and hardships to undergo to unlearn the old habits and learn new ones, the threat that change poses to those who may be incapable of learning new habits, the unpredictable results of doing something new and the general tendency of many people to maintain the status quo and some stability - all these interact to provide strong opposition to change.

---

[12] Everett M. Rogers and F.Floyd Shoemaker. op cit. p. 203

EXERCISES

SYNDICATE GROUP A:

1. Using your individual organization as the basis, plan a training programme that will deal with the needs and problems of the organization.

2. As a group, work out a paper that would identify the similarities and peculiarities of the different programmes and draw a general conclusion on why these differences and similarities exist.

GROUP B.

As a programme designer, describe how you would handle the case of an organization where individual objectives are in conflict with organizational objectives?

Assume that the organization still wants to retain the employees and the later want to continue with the organization.

Clue - You may consider leadership syles, organizational climate and feedback loops.

GROUP C

1. Design a programme for a fresh gradutate in chemistry who has been recently appointed a manager in a manufacturing industry. His duties would include:
    - (i) Supervision of foreman and other Supervisors.
    - (ii) Coordination between weaving and engineering Dept.
    - (iii) Ordering and storage.
    - (iv) General Management.

2. Identify the problems that the programme might face in implementation and show how you would deal with them.

TRAINING CURRICULUM DEVELOPMENT

I. OUTLINE OF CONCEPTS AND APPLICATION

(a) Introduction and Definition of Terms: In order to generate meaningful discussion on Training Curriculum Development it may be necessary to have a clear idea of what training and curriculum are. Furthermore curriculum has become such a loose concept in the training field that most people interchange it with a training syllabus. It is important therefore to distinguish between these two terms.

(b) Training and Curriculum: Training may be regarded as any process of developing an individual in order to increase his performance standard within a given job or within a given occupation, trade or profession.

This specifically removes the general assumption that training is education. While training is designed to meet specific performance needs, education is a continuous process of learning through formal or informal channel to help an individual cope with the challenges of living within the community of people.

Training a man to meet a desired performance standard in a given occupation means providing him with the necessary knowledge, skills and attitudes that the occupation needs. The acquisition of the necessary knowledge, skills and attitudes means an exposure of the individual to some specific information, activities and experiences. These spcific information, activities, and experiences, when arranged in a logical sequence to produce meaningful learning effect, constitute the curriculum.

In a more specific sense, curriculum is a course of study deliberately designed to produce a change in the behaviour of a given target population.

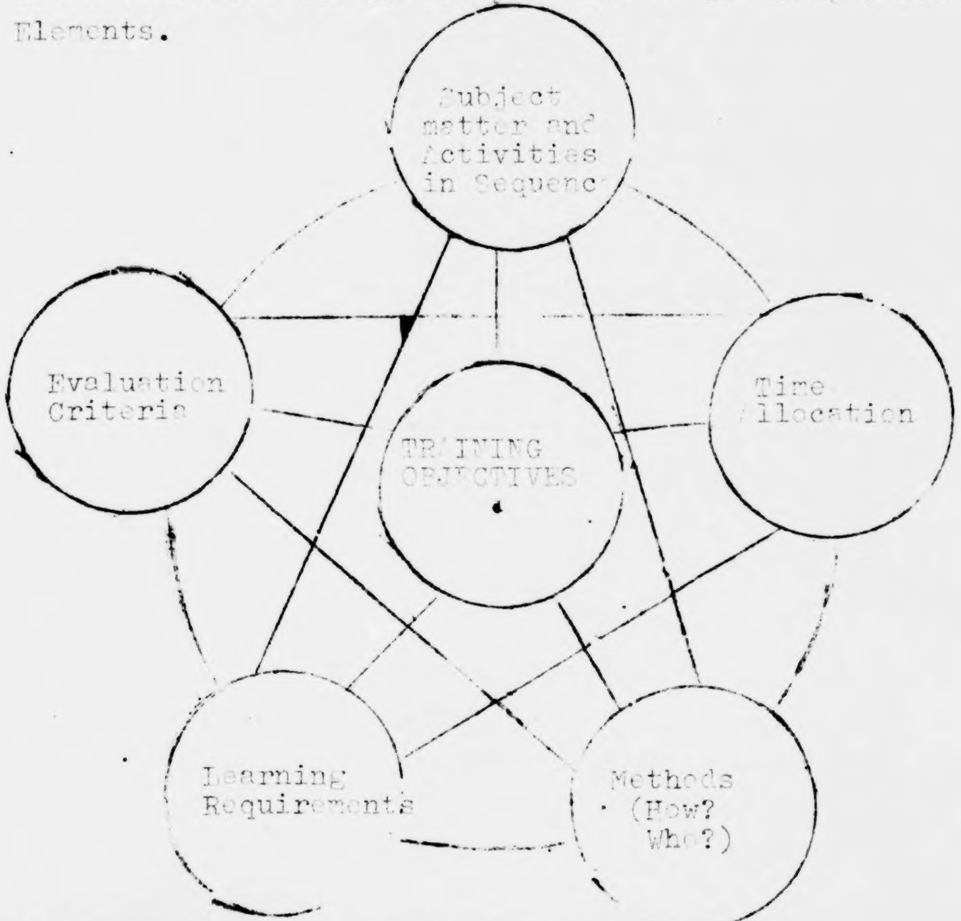
Training curriculum therefore is a set of learning subject matters and activities arranged in a logical sequence to develop the knowledge, skills and attitudes of a given target population toward their performance efficiency in a given job.

Unlike Training Syllabus which is merely a statement of subject matters in a broad outline, curriculum specifies:-

- Training Objectives
- Learning contents - subject matter and activities arranged in a logical sequence in terms of:-
    - (a) Learning order (from simple to complex; known to unknown.
    - (b) Chronological time allocation for the learning sequence.
- Teaching-learning methods required.
- Teaching-learning requirements- aids, materials, handouts, environment and required readings.
- Faculty involved.
- Evaluation criteria.

These elements constituting the curriculum are interdependent and each is influenced by the Training objectives which are " statements of what the trainees should be able to do at the completion of the curriculum"

Fig. 1. below indicates the interdependence of Training Curriculum Elements.


Subject matter and Activities in Sequence
Time Allocation
TRAINING OBJECTIVES
Evaluation Criteria
Learning Requirements
Methods (How? Who?)

II. TRAINING CURRICULUM DEVELOPMENT IN TEN STEPS

1. Determine Job Levels relative to Organizational Requirements and Objectives.

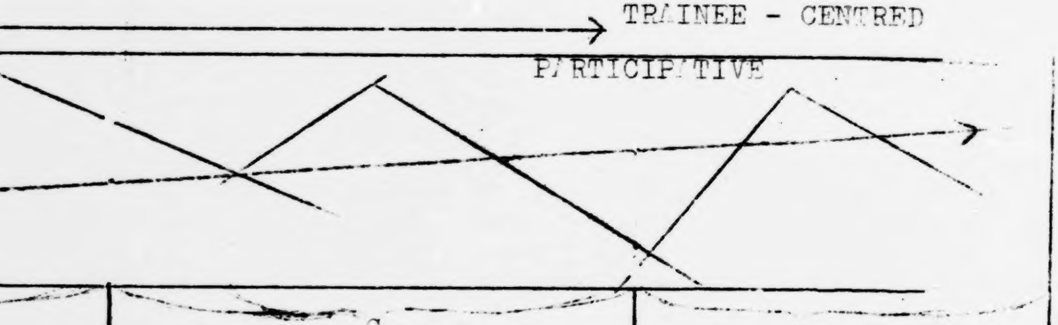
2. Prepare Job Descriptions (Major and Minor-tasks).
3. Prepare Job specification.
4. Identify subject matter and activities and arrange them in a logical learning sequence to develop.
5. Determine Trainees' entry level.
6. Match entry level with syllabous in 4 so as to determine trainees' particular learning requirments.
7. Specify learning objectives for trainees' requirements (indicate time and resources).
8. Develop teaching-learning programmes (Indicate time and methodology).
9. Conduct a Trial-run on a captive audience (Presentation for acceptance and criticeism).
10. Evaluate, validate and finalize Training Curriculum.

III. TRAINING CURR

TRAINER = CENTRED ←

A	B
Here in developing the curriculum training is looked on more as a convalascent activity-an activity embarked upon as a result of operational failures & incidents. Trainer's needs are determined on the basis of past failures.	In devloping curriculu training is generally as a pressurized activ embarked upon to solve rent operational probl only.
In developing the curriculum the trainer assumes responsibility for leciding on subject matter & activities. He arranges them in a sequence that fits his perceived programme. Therefore the learing sequence is fixed in relvana by him.	Trainer negotiates lea subject matter and act ies with Management or boss of the trainee bu control on the sequent flow.

CULUM DEVELOPMENT CONTINUUM



	C	D
here viewed ty cur- ms	In developing the curriculum here training is generally carried out to meet anticipated operational needs.	Training is accepted as part of overall strategy for organizational and individual development.
ning vit- the hods al	Trainer consults superiors to determine their needs in line with guidelines from Management.	Trainer works with management to determine orgaization's training needs and priorities in line with overall objectives & requirements.

A	B
Trainer assumes responsibility for deciding Trainee's needs & formulating learning objectives by focussing on the shortfalls that were responsible for past mistakes.	Trainer identifies needs & develops le objectives by focus his personal percep the complaints fro inee's boss & what are the current nee organization.
Trainer prescribes teaching-learning programmes based on the syllabus he has formulated and relies on the teaching learning strategies, methods, techniques aids & materials he traditionally prefers.	Trainer develops te learning programmes on the negotiated s but presents justif for them. He still the choice of teach ing strategies, met techniques, aids &
Conducts programmes according to schedule without trail-run & generally relies on his traditional expertise and experience.	Trainer conducts pr and, modifies curri content & time allo through trial-byerr terms of the extent training has helped rect existing opera problems.

	C	D
rainees' rning ing on ion of the tra- e thinks s of the	Trainer examines the nature of the Trainees' job requirements to develop means of helping trainees to select their needs & to agree on learning subject matter & activities. The Trainer consults the trainees on the sequencing of learning subjects and activities for their agreement.	Trainee is encouraged to identify his own present and future needs, he is encouraged to decide on the learning subject matter & activities. The sequencing is made flexible to permit similar subjects to the learned in different sequence by different trainees.
ching based llabus cations controls ng-learn- ods, aterials.	Trainer & trainees develop learning objectives by focussing on the needs of the trainees.	Trainee is permitted to formulate his learning objectives by focussing on issues that are currently important to him and of appropriate significance to his self & career development.
grammes ulum ation r & in to which to cor- ional	Trainer collaborates with the trainee to design teaching-learning programmes based on the agreed syllabus Trainer accepts suggestions on the most appropriate teaching-learning strategies, methods, techniques, aids, & materials but takes final decision based on his expertise & opportunities available.	Trainee is assisted in the development of teaching-learning programmes based on the syllabus he was assisted to formulate. He is permitted to select the teaching-learning strategies, methods, techniques, aids, and materials that would bring about the most effective learning.

A	B
Coverage of the programme content forms the basis for assessing curriculum in terms of time allocation only. He generally evaluates scheduled courses in terms of the extent to which his goals are met.	

C	D
Trainer conducts a trial-run for suggestion and further influence.	Trainer conducts a trial-run on a captive audience-the trainees and professional collegues for criticism & to test acceptance.
Trainer develops means for the trainee to evaluate the traial-run programmes before he finalizes the curriculum.	With trainees, curriculum is evaluated, validated and finalized for on-going training but subject to adjustment as needs arise.

IV. TRAINING COURSE/PRO

Environmental or Working/job situation constraints	Work/job/Environmenta and Needs
1. What is the occupational task? 2. Where is this being undertaken? 3. What is going on, i.e. what is the job content, product and service. 4. Who is experiencing what?	- Problems to be solv - Obstacles to be ove Discrepancies to be - What are the desire job performance cri Is the work force a - What is the actual/ level. is the workforce me What deficiencies o evident. - What are the conseq descrepancy, what h ignored? If they are serious - What is needed to h tion eliminate, or and meet the specif - What and how much i of knowledge, skill - is it a problem tha through Training or techniques.

GRAMME PLANNING AND DEVELOPMENT

l Obstacles	Programme Focus	
	Goals	Objectives
ed rcome eliminated d/standard terial is ware of them? present performance de aware? r short-coming are uences of this appens if they are : elp him/organiza- o the job better ied conditions. s needed in terms s, or attitude. t can be solved other Management	- Broad and abstract - They are organization oriented. - They are related to broad organizational policies.	Specific statemtnts of intent: 1. They are terminal statements of intents activity: they reflect what a trainee will be doing - When demonstrating his achievement of an objective - Under standardized norma working conditions: - at the end of the course in work situation. 2. They are specified in terms of: -Performance behaviour to be acquired. - Conditions under which they are to be met. - Level of proficiency. They should be: able and Operational & terminal.

Best copy available

RESOURCES
- Major text books to be used - Places to be visited - People to be consulted or invited - Films slides etc. to be used.

PROGRAMME EVALUATION

ave the deficiencies, discrepancies been eliminated.
en he/she do what she/he could not do before.
an he/she now perform in accordance with the required
tandard or proficiency?
onsider
ppropriateness of skills, knowledge etc.
dequacy of problem solution.
uality of skills, knowlege etc.

s the programme
fficient in terms of operating at minimum cost & effort
ffective in terms fulfilling the goals for which it was
stablished.

ecessary to
demonstrate hypothesis or generalization validity;
ensure consistency of results on subsequent programme use;
to conclude on whether to accept or reject programme
content, methods or staff-resources.
Determines whether objectives of training programmes fulfil
needs of organization.
Discover whether objectives are being realized in most
effective and efficent ways.
Ensure active involvement of management in the training function

V. PROGRAM

Concepts & Generalisations	Subject Areas/I
- General Statments explaining the relationship between the problem, needs and goal. They reflect tentative conclusions which provide a bsis/hypothesis for:- - Investigation, reasoning or orgument in the course of study analysis testing, investigation, experimentation, or inquiry, or programme testing.	Answer the question will the objectives fulfilled. i.e. wha areas would expose trainee to require knowledge & attitu should be studied & in to ensure the m of knowledge, skil attigudes desired.

ME CONTENT AND STRATEGY

iscipline	Subject matter content for "syllabus"	Instructional Experience
, how be t broad the skills, e? What engaged astery ls and	-What specific sub-topics are needed are needed from the broad areas. What are the interest skills, knowledge & attitudes to be acquired. i.e.e What does he/she needs to know to enable him/her to perform in accordance with the required behavioural level and proficiency. i.e. in accordance with established job requirement performance standards. Would this subject-matter provide them.	How does he get to know or acquire/master the respective knowledg, skill, experience & attitude. How does he get to practice the acquired skill. How does he apply the acquired body of knowledge out of working place, within working place, at hom/school, programmed/assised. Reading assignment, discussions, lectures, demonstration, case studies, analytic inquiry, discussions, simulation & gaming, instrumented, visits, internship. i.e. How will the learner gather what he/she needs; or how will he/she overcome his/her deficiency. Consult specialists conduct experiments observe demonstration i.e. The activities that instructors learners will engage in order to quide the learners to the acquisition of knowledge practice and mastery of skills needed in eliminating the obstacles or perceived and felt problem.

COURSE MANUAL FS. 3 - 4

DETERMINING TRAINING NEEDS

Determining Training Needs

The concept of training and development needs emerged originally from a basically simple, oft-asked question in management circles: Do we or do we not have a need for training? Unfortunately, this relatively good question is too often short-circuited into the statement: "We certainly have a training need here!" And therein lies the beginning of a vast wasteland of unnecessary and expensive training programmes which have given rise to the odious label of "training programmes for training programmes' sake."

Educational, training, and developmental programmes should be a response to a need, not merely a reaction to a problem. When a problem has been identified, the next step is to develop alternative solutions. Sometimes the most feasible answers are better materials, methods, and machines, or more money, rather than a training programme.

A. Definitions

A training need may be described as existing any time an actual condition differs from a desired condition in the human, or "people," aspect of organization performance or, more specifically, when a change in present human knowledges, skills, or attitudes can bring about the desired performance.*

This definition would largely rule out, as constituting a training need, the problem of obsolete plant equipment that is unable to manufacture products to tolerance or at economical production rates. If, however, procuring machinery of the latest type to get quality production faster was adopted as a solution, this would in turn require operator training programmes to update the skills of operators using the obsolete equipment so that they could master the new machinery. If a compensation programme for store managers is not providing incentives that "motivate" good managers to increase sales results, the answer may be (among many possibilities) an updated incentive programme rather than a training programme in "how to improve sales results." If the new incentive programme is adopted, this might initiate the need for a brief training programme in "understanding the new sales incentive programme for store managers."

A developmental need, as differentiated from a training need by many training professionals, deals with the total growth and effectiveness of the individual, particularly as the person expands realized abilities toward the potential that he or she seems capable of achieving. To others, developmental activities are pointed toward future, usually higher-order, responsibilities than those held by the individual at present.

Organizational or corporate goals often provide clues to future performance requirements and possible training needs. Expansions, new products, new markets, modernization, new system installations, adoption of new managerial techniques or organization structure, revised financial requirements, and new legislation all create a demand for training programmes to produce changed behavior.

B. Broad Approaches

In general, there are three ways to get at training needs:

1. Assuming a performance problem has been identified with a particular group, survey that group for whom training may be needed, their supervisors, the receivers of the product or services provided by that group, and their subordinates, if any. Here the focus is on the group responses which, when analyzed properly, can lead to the preparation of training for individuals, usually in groups.

2. Conduct organizational audits that review production financial, personnel, and other operational data from records and reports to uncover problem areas susceptible to correction through training and/or development. A full functional audit of an area may need to be conducted to get a thorough analysis of the situation. Here the focus is on "results" of activities, and you work backward to the causes to identify training needs.

3. Assess an individual's achievement levels, knowledges, potentials, behaviors, skills, and performance; prepare a needs analysis; and plan development and training specifically for that individual. Similar techniques may be used with groups of individuals, but the focus is on the individual, and the outcome should include individual development plans.

We shall consider each of these approaches, beginning with the survey technique.

C. Survey Techniques

Survey techniques range from one-page "yes" or "no" response sheets to highly sophisticated methods requiring a multidisciplinary approach - from the "felt-needs" response of the participants to the carefully constructed questionnaires which scientifically cross-check the responses two or more times.

(a) Educational-Needs Survey

The educational-needs survey has, in the 1970s, attained a new level of accuracy and usefulness. The major steps in making the survey are:

(i) Review: Review the past and current training programmes and the reactions to them. Review the educational and training policies and how they have been implemented (in-house programmes, tuition refund, association-sponsored programmes, university short courses, on-the-job training, etc.).

(ii) Determine the scope and utilization of the survey: Who and what will be covered by the survey, and why? Do you want a 100 percent survey, or will a sampling be sufficient? Will you take action on the findings? What are you trying to accomplish by using the survey instead of other needs-determination techniques?

(iii) Conduct personal interviews: Key people on several levels should be interviewed. If the survey is assessing supervisory training needs, interview not only the supervisors who will receive the training but also their supervisors and their subordinates. In the case of a salesperson training-needs survey, interview representative customers and sales managers as well as selected salespeople.

(iv) Construct the questionnaire: The questionnaire should get at the needs of the group for whom the training is intended. If persons other than the group for whom training needs are being determined are to be surveyed, a questionnaire specifically worded for such people should be designed. Test the questionnaire on a sample group in order to "debug" it before printing.

(v) Administer the questionnaire: It is often best to give the questionnaire on company time so that a 100 percent return (or thereabouts) can be obtained.

(vi) Analyse results: The computer can be used to advantage when there are large amounts of data or when the analysis and correlation of results are complex.

(vii) Develop training objectives and design programmes: This step is covered extensively in other chapters of this handbook.

(b) The Employee Attitude Survey

The attitude survey has long been used as a method of uncovering training needs. Employee attitude surveys frequently are conducted to obtain reactions to supervisory and managerial personnel for use in designing management training programmes.

Presurvey investigations are necessary. There must be some idea of the "openness" allowed in the company. (How receptive and nonpunitive is the company atmosphere in terms of individual ideas, feelings, and attitudes?) Usually an organization brings in a third party with an objective view to conduct an employee attitude survey. The respondents in an attitude survey should feel free to express their true attitudes. Care must be taken in forming the questionnaire to avoid questions that lead to preconceived answers.

Currently, questions about worker and managerial satisfactions with employment are often grouped within a structure of leading motivational theories. When the motivational frame of reference is à la Herzberg, for example, questions relating to job satisfactions and dissatisfactions are designed to explore the "hygiene" and "motivator" job factors and then are sprinkled throughout the attitude questionnaire. Using computer approaches, the clusters of questions about each factor can be analyzed and cross-checked to determine with fair accuracy the extent of the satisfactions or dissatisfactions. The steps for devising this survey should be similar to those for designing the educational training-needs survey. It is best to correlate answers with normative, or demographic, information. This information should be asked for in such a way that employees can maintain their anonymity if there is any question or fear of reprisal. Once the responses have been analyzed, the training department should recommend any training that might be appropriate.

(c) The Consumer, or Customer, Survey

Sometimes needs exist which are not apparent to those involved in the production of the goods or services, but which might cause friction among the receivers of the service or the product. Such problems are revealed by means of a consumer, or customer, survey. The design of customer surveys follows the pattern of other surveys:

(i) A review of the past and the current situation leads to a determination of the objectives of the survey.

(ii) Will you question only those who have already been or who are presently customers, or will you question people who are not now customers to try to find out why not and how they could be persuaded to become customers?

The format should be simple, since customer responses are apt to be difficult to obtain because the benefits to be derived are not obvious. The same techniques of correlating answers should be followed as those used in the educational-needs survey. The value of the survey lies in the intepppretation of the answers received and in the follow-up actions. Data should be obtained on what changes are indicated, how strongly they are indicated, and whether making the changes is feasible.

Responses may indicate areas of training needs (the case of the permanent employee who is not able to furnish information about stock items) or possibly the need for closer supervision (the case of the employee who handles sales indifferently or who alienates customers). Analysis of the results obtained from a customer survey can uncover areas of training needs that have not been noticed within the organization.

(d) The Delphi Technique

The Delphi technique is a method of systematically soliciting, collecting, evaluating, and tabulating expert opinions, usually in long-range forecasting. It is conducted anonymously in order to reduce distorting factors common in committee decisions, such as the unwillingness to contradict publicly expressed opinions, the bandwagon effect of majority opinions, or the impact of a highly articulate or powerful advocate of a particular stance.

The Delphi technique works typically as follows:

(i) An opinion is asked on a particular question or problem. The statistical results are then gathered, indicating the distribution of responses, the median response, and the interquartile range (the interval containing the middle 50 percent of the responses).

(ii) The results of this tabulation are again distributed to respondents, who are asked to reconsider their answers and revise them if they want to. Respondents whose answers are outside the interquartile range are asked to state briefly why they feel their answers were much lower or much higher than the majority of opinions. This produces a responsibility toward "extreme" answers. It also allows an opportunity to justify and defend an answer.

(iii) The statistical results of the second survey are gathered (and typically there is a move toward the median). The reasons for the extreme answers are also summarized and presented.

(iv) These results are redistributed a third time, and respondents are asked to revise their opinions once more if they choose. The median of the final responses gathered is taken to represent the group consensus.

Based on a combination of experience, judgment, and a sort of intuitive perception, the Delphi technique has been described as a "quantitative intuition." In terms of assessing training needs, it would probably be most useful for forecasting future training needs in relation to long-range company plans or objectives.

(e) Problem Survey

The problem inventory is usually administered to a group of people for whom training is to be provided. It is therefore a "problem-centered" approach that leads to practical, specifically targeted programme planning.

In applying the technique, for example, at a meeting of district sales managers for whom training needs are being assessed, a supply of 3X5 cards is distributed to each sales mnaager. The group is instructed to write down problems they are now facing in their districts - one problem to a card. The best way to develop problem statements is to begin them with the words "How to....".

The group is asked to avoid large, catchall, umbrella-type statements, such as how to increase sales in my district next year." Far better are more specific problems, such as "how to identify new prospects for product X.". The managers are requested to write down as many problems as they can think of for which they would like some practical ideas for solutions. The cards are then picked up, and a small committee, including a training staff member, sorts through the problems, clustering them into groups and arranging them into a logical sequence. "Commonality" can be quickly determined by the number of cards identifying a particular problem, although a problem mentioned only once may turn out to be a most insightful guide for preparing objectives and programme subject matter outlines. The latter can be ensured by providing the committee meeting. Ask the committee members to consider each problem statement as to its originality, creative insight, and possible value for inclusion in the training. At the next meeting, discuss each of the problems on the list, as a group, before discarding any.

D. Analysis of Training Needs

We need to determine training needs for various reasons:

1. So people will be more productive on their present jobs and be ready for advancement.

2. Because the success of the enterprise requires that everyone perform at his optimum level. This calls in part for determining and meeting the specific growth needs of each, which should be translated into training.

3. Because all "good" people, regardless of organizational level, can do a good job, want to do a good job, and will do a good job - if they are given a chance. This chance comes in part through tee provision by the company of opportunities for a person to improve his knowledge, skill, or attitude. In doing this, the company increases productivity and the individual advances his career. Again, the first step is to determine valid training needs.

4. Because time, money, and effort can be wasted through training that is not based on valid present or emerging needs.

E. Getting Clues to Training Needs

Basically, training needs may be determined by finding out what is going on now and matching this against what should go on, now or in the future. The gap, if any, gives clues to the kind and amount of training needed.

The "finding-out" tool is the standard of performance for the job. This is a statement, preferably written, describing the conditions which will exist when the job is being done properly.

Every job has a standard. However, this standard is often only floating around in the boss's head. Lucky are the subordinates who have at least been told what this standard is. Truly fortunate are those who actually have been given a copy of the standard. Their boss was astute, intelligent, and persevering enough to reduce the standard to writting, which is not an easy task. Where no written standard exists, there may be, in fact, two standards: the one the boss has floating around in his head. These standards may not be the same - a pity indeed.

The standards for doing a job often can be expressed in terms lending themselves to discrete measurement. The standards for management jobs often are expressed as the goals or objectives of the organizational unit for which a manager has responsibility.

F. Kinds of Training Needed

Training needs may be categorized in terms of those which:

An individual has
A group has
Must be met immediately
Can be met in the future
Call for formal training activities
Call for informal training activities
Call for on-the-job instruction
Call for off-the-job instruction
The company can meet best within itself
The comaany can meet best through outside resources
An individual can meet in conert with others
An individual can meet only by himself

G. Some Ways to Determine Training Needs

There are many. Each has its advantages, each its disadvantages. Each can be tailored to meet a specific situation. They can be used singly or in combination. For our purpose here, these approaches are arranged (1) by method and (2) by source.

1. Methods to Determine Training Needs

(a) Analysis of an Activity (Process, Job, Operation)

One way to increase productivity is to keep to a minimum the number of steps which must be taken to produce a product or service, then make sure each step is handled with the least amount of time, effort, and money. The procedure is simple:

(i) List as steps in a logical sequence the activities involved in producing a product or service, or part thereof. This calls for great attention to detail. Don't miss a single work, movement, or storage point. Review your material on work simplification.

(ii) Question each step ruthlessly. Is the step still needed? Can it be combined with another? Can it be simplified? Is a new machine or less expensive material or a new process or procedure available?

Under the impact of the creativeness of those concerned, what activity can change from time to time? These changes can produce training needs. What new knowledge or skill is called for? Should present knowledge or skill be modified? If so, to what extent, when, and by whom?

(b) Analysis of Equipment

A new piece of equipment or modification of present equipment may call for new skill, knowledge, or understanding on the part of the foremen and/or operators. Therefore, get answers to questions such as these:

(i) In what ways will the new or present equipment be different?

(ii) What new skills and knowledge will be needed?

(iii) Who will need it?

(iv) When will they need it?

(v) What new attitudes may be desirable for all concerned?

The answers to these and related questions will provide clues to training needs. Incidentally, these answers can come from several sources, not only the supervisor.

(c) Analysis of Problems

Clues to training needs can come from an analysis of an operating problem. The problem may have emerged in part because an individual or a group didn't know enough, didn't have enough skill, or didn't have the necessary understanding to handle a specific challenge at a given moment in a specific situation. To analyze a problem for training purposes, just ask some questions. Among the best we find our six faithful friends: what, why, who, when, where, and how. What, exactly, is the problem? Why is it a problem? Who is involved? When was it triggered? What kind of knowledge was missing - what kind of skill, what insight or attitude? What should be done so that the problem (or one like it) can be handled properly if it reappears? Who should get additional knowledge, skill, or insight? When should they get it? Who should give it to them? Where should it be given? How should it be given? What kind of follow-up should be conducted?

When analyzing a problem for training purposes, the thinking and suggestions of others can be helpful. Seek this help. It's good insurance for you and can increase the value of the eventual solution. However, weigh all ideas carefully, for training may not be the best solution in a given situation, even though some of the people involved may feel it is. Instead, better day-to-day supervision on the job, for instance, may be the answer.

(d) Analysis of Behavior

Clues to training needs can come from an analysis of atypical behavior by individuals or groups. Chronic absence, spoilage of work, carelessness, accidents, irritability, contentiousness, resistance to direction, resentment toward instruction, etc., are symptoms of conditions which may call for corrective action involving training. A manager, for instance, may need to be a better planner, or communicator. A group may need to know more about a policy, and so on.

(e) Analysis of an Organization

Poor organization can affect individual and group performance. Failure to meet goals, confused planning, sloppy delegating, weak discipline, capricious rewarding, unclear goals, absence of standards of performance, favoritism, uneven work load, etc., can lead to low morale and marginal organizational performance. Note that the presence of these or other weaknesses can produce some of the patterns of individual and group behavior listed above. An analysis of these weaknesses can produce clues to training needs, both individual and group.

(f) Appraisal of Performance

Appraisal of performance actually goes on constantly. The boss appraises his subordinate; the subordinate appraises himself; others quietly appraise both boss and subordinate. Often this appraisal is casual, subjective, and unrecorded. It may not even be discussed. Yet each such appraisal can end with a recognition of a training need. Someone should "get" something, be it additional knowledge, skill, or understanding.

To improve productivity, organizations increasingly are turning to programmes of formal periodic appraisal of individual performance. A device is developed and a procedure worked out. Standards of performance are used as a basis for measurement.

Whatever the device and procedure, one of the outcomes is an indication of the appraisee's growth needs. Some of these needs are training needs. The individual then can undertake self-development activities independently or through company-provided media, or both.

(g) Brainstorming

Some training practitioners find brainstorming a helpful way to determine training needs, especially of a group. The procedure is simple:

(i) Bring together a homogeneous group (salesmen, clerks, engineers, supervisors, executives, others).

(ii) Place in front of them on a blackboard or flip chart a question of common concern. Phrase it as a "how to" question.

(iii) Ask individuals in the group to call out any ideas they have for answering the question. Write these ideas on the blackboard or flip charg as fast as they're called out. Don't be judicial. Don't try to organize the list. All you want at this point are ideas. Announce a time limit, e.g., five minutes.

(iv) When time is up, examine the list. Identify items which call for additional knowledge, skill, or attitude. These are training needs. Note that some ideas may bear on other needs such as changes in organization, policies, and procedures. These are valuable clues to productivity improvement opportunities outside the training sphere.

(h) Buzzing

Buzzing is a group-dynamic technique used to tap the thinking of a group for possible solutions to a common problem, to develop a procedure, etc. It consists of dividing the audience into small groups of four or five persons. Each group chooses one of its members as chairman and another as recorder. At a singal each group starts to discuss the question at hand. The chairman keeps things moving. The recorder writes down all the ideas thrown out. At the end of the work period (ten to twenty minutes) the groups reassemble. Then the chairman of each group reports from his recorder's list what his group has produced. Each i-ems will be duplicated. These duplications are shown by adding a mark after the original statement. When all groups have reported, final ideas are added from the floor. Later the list is classified for further use.

Buzzing can be used to identify training needs. For instance, an dudience of supervisors, managers, professional personnel, or others (as long as it is homogeneous) can be given a question such as, "What are desirable next steps in our training?" or "What additional areas of knowledge (or skill or understanding) do we need to handle our work better during the next project or period?"

(i) Card Sort

This is a forced-choice procedure. A batch of 3 x 5 cards (usually no more than 10) is typed up with a single job-related "how to" statement on each. Each statement is a potential training need. These cards then are handed to the person whose ideas are sought. He arranges these cards in what he feels is their order of importance for him. If he feels a card should not be included at all, he leaves it out. If it is desirable to get leads from several people at a time, each is given an identical pack. For a group of supervisors, for instance, the cards might read: "How to plan", "How to organize", "How to assign work", "How to write reports"; "How to delegate", "How to understand the labor contract"; "How to train";"How to stop tardiness"; "How to get more cooperation"; or "How to stop bickering."

The arrangement of the cards gives clues not only to training needs, but to the order in which the sorter feels they should be met. If several people have arranged the cards, make up a chart showing the distribution of desires.

(j) Checklist

A job, process, programme, activity, or area of responsibility is broken down into a list of detailed parts or steps arranged in logical sequence. A column to the right is provided for checks. A copy of this list is given to each person whose ideas are sought. He checks off the items about which he feels he would like to have more skill or knowledge. If several people are involved, their responses subsequently are plotted on a distribution chart. Thus training needs of the person or group are identified.

Lists of all kinds can be made. One for supervisors might include basic functions such as planning, organizing, operating, controlling, and their elements. One for salesmen might include preparation for a call, presentation of the pitch, closing the sale, report writing, and their elements. One for budgeting might include preparation of assumptions, analysis of goals, alloting time units, pricing units, and their elements. The important thing is to be sure the items are work-related, so training needs can be shown in terms of skill or knowledge.

(k) Committee

An advisory committee composed of persons responsible for, or with a direct interest in, an activity can identify training needs with considerable accuracy. Some organizations have a companywide training advisory committee. Others may have a committee for each area of training - orientation, apprentice, sales, clerical, technical, presupervisory, supervisory, management, executive. In some organizations each separate course has its own committee.

A training advisory committee helps the practitioner to analyze operating problems for training purposes, construct curricula, audit instruction, or evaluate results. The personnel of a training advisory committee should be selected carefully. Each member should have a personal stake in the success of the activity for which the committee is responsible. This suggests that a key manager (policy, relationships) and a top operator (subject matter authority) should serve. The training practitioner often is ex officio consultant. Other persons can be added as need indicates.

(l) Comparison

To increase company productivity, many organizations employ full-time training practitioners. These capable and dedicated men and women concern themselves constantly with ways training can help to solve operating problems. These operating problems stem from many specific situations. To meet these challenges (training needs) practitioners develop ingenious solutions. Frequently these solutions are shared with other training practitioners through the Training and Development Journal, training conferences, or other media.

By keeping in touch with these sources, a training specialist can compare what he's doing (or contemplates doing) with what others are doing or have done. He can learn about new ways to handle old problems, keep up to date on new techniques and procedures, fight his own obsolescence.

(m) Conference

A conference of persons concerned with an operating problem can identify training needs and make decisions on ways these needs will be met. Clearances, policy determinations, cost factors, and other elements can be worked out. Unlike a committee (which has continuity), a conference often is a one-shot affair. (See Chapter 9 on conference method.)

(n) Consultants

The employment of outside consultants is another way to determine training needs and develop ways to meet them. Several management consulting firms provide this service.

The selection of a consulting firm should be done with care. Names of ethical practitioners can be obtained from companies who already have employed consultants, from trade and professional associations, and from the American Society for Training and Development. (See Chapter 22.)

Outside consultants use a variety of methods for determining training needs. Included are surveys, questionnaires, conferences, interviews, analyses of various kinds, studies, and observations. They also seek the opinions of the organization's training practitioner if one is available.

(o) Counseling

Counseling is often a discussion between a training practitioner and a person seeking guidance regarding ways he can improve his on-the-job performance or prepare for advancement. Outcomes may include agreements on what kinds of additional knowledge, skill, or understanding (insight) the counselee should seek. An especially fruitful counseling opportunity exists during the postappraisal discussion between an employee and his supervisor. The appraisal has been work-centered. The discussion is dedicated to an identification of growth needs, and agreements on how these needs will be met.

Counseling itself generates a training need, for anyone responsible for the work of others, e.g., all managers, must coach and counsel them often. To do this satisfactorily calls for training in counseling techniques plus periodic refreshers.

(p) In-basket

The "in-basket" involves a training procedure which gets its name from the nature of the exercise. It is used to measure or test a manager's ability to handle some of the day-to-day challenges which come to him in writing from various sources. These challenges show up in his "in-box" -- usually a box on his desk into which messengers, his secretary, or others place letters, memorandums, reports, notes, requests, directions, etc., for his attention. During an in-basket session, the participant is given a large envelope containing prepared in-basket items. During a time period (for instance, thirty minutes) he handles as many of these items as possible by writing on each piece of paper what he decides to do about the matter it contains. At the end of the time period, his decisions are discussed. Clues to training needs may emerge.

(q) Incident Pattern

Over a period of time, everyone's behavior fluctuates above or below his optimum level of performance depending upon how he handles emergencies or unusual challenges. Under the incident pattern, these responses to special situations are noted in terms of success or failure in each situation. At the end of a reasonable period, perhaps one year, this pattern of deviation is studied. If certain types of situations are seen to produce inadequate behavior, these can be analyzed to determine what additional knowledge or skill the individual needs to handle these situations successfully.

(r) Informal Talks

Within his organization, the training practitioner meets many people. He talks informally with most. Out of these dialogs may come clues to training needs which might not come to light in any other way. The practitioner must look consciously for these signals, for they may not be loud and clear.

(s) Interviews

A training practitioner may feel training is needed in an organization unit. To get information, he arranges a formal meeting with the person or group concerned. In preparation for this meeting, he lists pertinent questions. At the meeting, he employs the interview technique. Referring to his list of questions, he asks each in turn, writing down the answers for future study.

Other types of interviews (employment, transfer, promotion, etc.) are used in an organization. One quite helpful is the exit interview. During this "last talk," a person leaving the company is in a position to suggest how things could be better. Some of these things may point directly to training needs.

(t) Observation

The training practitioner has freedom of movement throughout the organization. During his travels, he can observe many things. Some of these may have value as indicators of training needs, eppecially needs which are just under the surface, or emerging. He needs an alret and creative mind, good eyes, sharp ears, and a discreet mouth.

(u) Problem Clinic

A homogeneous group meets informally to discuss a common problem and develop a solution. This solution may require training. For instance, in the problem is how to increase sales by 5 per cent during the next quarter, the solution in part may be to give each salesman additional product knowledge (a training need).

(v) Research

Many companies, industry associations, universities, and other organizations conduct research constantly. Results may produce new products and materials, or new sses for present products and materials. As these new assets are phased into a company's planning, implications for training and development emerge. The training practitioner, as one of the planning group, recognizes these implications and plans accordingly.

(w) Role Playing

Role playing is a training procedure featuring two or more persons playing assigned parts or roles in a "playlet" simulating a real-life situation dramatizing a present or emerging problem (operating, communication, interpersonal relationship, etc.). How each role player handles himself under the press of the situation can give clues to his training needs in a skill, an area of knowledge, or in understanding or attitude.

(x) Self-analysis

All "good" people constantly evaluate themselves. They want to do their best. They set high standards for themselves. They are critical of their performance against these standards. They "know" what they need in the way of additional knowledge, skill, or insight. Given an opportunity to express these thoughts, as through a company programme of formal periodic self-appraisal for growth purposes, they give direct clues to training needs. Where a number of people have this opportunity, a summary of their statements can reveal group training needs.

(y) Simulation

Simulation is also known as business or management gaming. Games are structured to permit teams of players (each taking a role) to compete with each other in managing a company, conducting a campaign, carrying out a function, or otherwise performing under conditions which demonstrate possession (or lack) of decision-making ability, Some games are designed to simulate several years of operation in a few hours or days. Analysis of performance can reveal individual and/or group training needs.

(z) Skills Inventory

Some companies establish and annually update an inventory of the skills of their employees. Listed are the skills these employees currently are using on their present jobs, plus other skills they possess which have value for other jobs. This inventory permits flexible use of manpower, especially under expansion or reorganization. It also identifies gaps or blind spots in reserve or stand-by skills. This gap gives clues to training needs.

(ai) Slip Writing

This is a technique used with groups especially at the last session of a training programme. Each person is given a number of 3x5 slips. A question is placed before the group: "I feel I need the following additional skill or knowledge about this subject," or "I would like the following related training," etc. At a signal, each person starts writing out his responses - one response to a slip. As soon as he writes one slip, he sets it aside and starts another. He writes as quickly as possible. He doesn't sign his name unless he wants.to. A time limit is set, usually five minutes. When time is up, the slips are collected. Later the training practitioner classifies these slips. The result is an indication of training needs. It is also a check against the validity of the instruction already given. Slip writing can be used in many other ways. Similar to brain-storming, it can be used to structure procedure, solve problems, and so on.

(bi) Studies

From time to time an organization, under the impact of its long-range planning, contemplates a change in pace or direction. To predict possible effects of such change, it undertakes a study in depth of all ramifications. Such studies can turn up training needs which will have to be met if the plans are adopted. Similarly, studies sometimes are made of present operations to identify ways productivity can be increased. Results may identify training needs calling for immediate action.

(ci) Surveys

Surveys can be used to take inventory of operations, employee attitudes, implications of advanced planning, etc. Like studies, surveys can be delimited to a part of the organization, or can be companywide. They can be focused on a single activity, or beamed at a combination of activities. Like studies, they are mounted only after a felt need exists for the information they will produce, for surveys are costly to mount. Part of the findings of a survey can identify training needs. Surveys often are one step in a study sequence.

(di) Tests

Testing is a well-established method of determining training needs. Tests can measure skill or knowledge. Some even are said to measure attitude. Tests can require a performance response (the manipulation of tools, materials, or equipment) or can require a written or oral response. Results indicate gaps, if any, in the testee's skill or knowledge, thus suggesting training needs. Among written tests, many feel the objective type is best. This is a forced-choice media, requiring the testee to underline a word or phrase, circle an item, write in a missing word, and so on. They are easy to administer but challenging to compose.

(ei) Task Force

A small group of selected personnel, usually two or three, is relieved of regular duty to spend full time solving an assigned problem. In anllyzing the problem, the task force may unearth training needs which must be met before their recommended solution to the problem can be implemented. Their final report identifies these training needs.

(fi) Questionnaire

Webster defines a questionnaire as "a written or printed form used in gathering information on some subject or subjects, consisting of a list of questions to be submitted to one or more persons."

The questionnaire is a well-accepted method to determine training needs. Each question is brief; each is specific; each is phrased to get a short answer; each is designed to elicit information which can be used to determine training needs, delimit the scope of the training, identify course content, etc.

A copy of a questionnaire is given to each person invited to help determine training needs. He writes out his answers to the questions and returns the completed questionnaire to the training practitioner or to the chairman of the training advisory committee.

Responses on the questionnaire are studied. If several questionnaires have been distributed, a summary of responses is made. The pattern gives clues to training needs.

(gi) Workshop

The workshop involves a technique which brings a group together to develop further skill through actual practice in a management function such as planning or report writing. As the group pursues its workshop goal, there may emerge evidence of individual and group needs for further training. While these needs fall most often into skill or knowledge areas, need for further understanding or insight about organization goals or operations may be indicated.

(hi) Other Ways

There are many other ways to determine training needs. The training practitioner will devise them to meet specific situations. The terminal objective is to determine what additional skill, knowledge, or understanding an individual or group needs to be more productive.

2. Sources of Training Need Information

Clues to training needs can come from a number of written sources. Even such sources as complaints, requests, suggestions, while usually oral at first, should be reduced to writing if they are to be used as a basis for determining training needs. The discipline of writing makes the information more precise and useful, and of course official.

Some of the methods described earlier produce written sources - studies and surveys, for instance. However, for our purpose here, we consider written materials already in existence.

(a) Articles

Business and professional publications carry articles dealing with many aspects of free enterprise, from research through production to marketing, plus space given to events and trends in the supporting staff activities. Often these articles deal with personnel utilization, from research in the behavorial sciences to ways companies improve productivity through training and development activities of various kinds on all levels. Reading these articles can give the training practitioner clues to training needs in his organization as he learns what others are doing or have done about problems similar to ones his company has, or could have. Learning what other companies have done or are doing may lead the practitioner to say: "This is something we should look into." Thus, for instance, has programmed instruction spread. In this sense, reading articles can give the training practitioner clues to training needs in his organization. A gold mine of such material is found in the Training and Development Journal.

(b) Books

A traditional source of ideas, books increasingly are becoming available in the field of personnel utilization. Titles range over a wide spectrum of subjects, from applications of the results of research in the social and behavorial sciences to management functions. Some of these books report examples of successful experience with applications of training and development techniques and procedures in improving productivity by solving growth needs of individuals and groups. Through transposition and implication, these reports can identify clues to training needs in any organization and suggest solutions through adaptation. Because of the time it takes to write and publish a book, the content may lag somewhat behind the content of articles in magazines. However, good authors carefully research many sources, including current journals.

(c) Case Studies

Structured to challenge a learner to solve a case or problem situation careful described in writing, analysis of a case and the development of possible solutions to the problem it presents can reveal gaps in a person's skill or knowledge or understanding (insight). These gaps are training needs. Many cases are available from commercial sources. Some companies develop their own to meet specific situations unique to their own environment.

(d) Complaints

From time to time in any organization individuals or groups can feel something just isn't right. The dynamic nature of work makes this possible. Often this restlessness or dissatisfaction takes the form of complaint. Some of these complaints are verbal, some written. Analyzing these complaints can reveal needs for additional skill, knowledge, or understanding on the part of individuals or groups. In short, they identify training needs.

(e) Crisis

A crisis in the operation of an organization or one of its units often subsequently reveals training needs. What caused the crisis? Was it poor planning lack of coordination, cloudy areas of responsibility, unwarranted assumptions of authority, breakdown in communication, inadequate control personality conflicts, or any of the many other things? These or other causes can indicate training needs

"Maydays" for help come unexpectedly, arrive from out of the blue, and generate heat and vibration. Some organizations, or units within, seem to have them often. Others don't seem to have them at all. The difference may be, in part, effective advanced planning - including the provision of adequate training in planning, organizing, controlling, and other functions for individuals or groups.

(g) Experience of Others

By others we mean especially other training people. Many of them have conduct and are conducting corrective and preventive training of all kinds, on all levels in all units of numerous organizations. They have used many ways to become aware of these training needs. They are happy to share their experiences. Many do share through the ASTD institutes, the national conference, and the Journal. They also share through correspondence and in other ways. Save yourself a lot of time and energy by tapping these sources. Also contribute your own thinking and experience through authorship. Experience of others in determining training needs can enrich your own.

(h) Factual Data

Clues to training needs can be found in the many kinds of factual data at hand in every company. For instance, the employee relations department will have information on absenteeism, turnover, grievances, overtime, or accidents. Production will have statistics on costs, work rejects, work schedules, production activities, service calls, waste, rework, maintenance. Research and development, sales, engineering, legal, finance, public relations and other departments will have their own particular data.

These data record conditions as they exist. They also help to indicate trends. Analysis will yield information about "why." This information can show what kind of additional knowledge, skill, or understanding may be needed by individuals or groups, i.e., training needs.

(i) Grievances

Many companies, especially those with unions, have a formal procedure through which an individual or group may bring to management's attention any condition or problem they feel exists to the detriment of all concerned. An analysis of these written grievances may indicate training needs, especially in aspects of supervision, administration of policies, or operating procedures.

(j) Plans

Plans are a constant source of clues to future training needs. Long-range plans reveal needs permitting adequate preparation, i.e., long-range training planning. Here preventive training can be done. Short-range plans reveal needs requiring more immediate action, even corrective training. The training man must know of these long-range and short-range plans. Properly, he should have a part in the planning itself. The best plans will fail if they're not implemented by adequately trained and motivated people.

(k) Policies

New policies about to be introduced and old policies which are being revised can pose problems of communication or performance standards. Before implementing these policies, additional skill, knowledge, or understanding may be needed by those concerned. If so, we have training needs.

(l) Records

A type of factual data, records of costs, work rejects, waste, service calls, accidents, absenteeism, overtime, and turnover can reveal clues to training needs. Incidentally, these needs may not be limited to persons directly responsible for deviations from standards. The real villain may be on the level above, i.e., inadequate supervision. The training practitioner must look beyond the record itself.

(m) Reports

As another type of factual data, reports usually are more narrative and detailed in style than typical statistical records. Reports can reveal training needs, but the training practitioner may have to dig for clues. Regular reports, such as those on production, sales, and performance, may require less digging than special reports on organization development, product development, research, or market development.

(n) Requests

Requests for training can be informal (usually oral) or formal (usually written). Requests, especially from management sources, simultaneously identify training needs. Requests sometimes follow a crisis or come just before a crisis seems imminent. Thus corrective (fire-fighting) training is mounted. Requests also may come as a result of advanced planning in an organization unit. Problems of implementation can be anticipated. Thus preventive training to get people ready can be designed.

The prudent training practitioner will insist upon written requests, properly cleared. He then will validate the request in his own mind before taking action. If, after his examination, a request seems marginal, he will discuss this conclusion with his superior. The problem generating the request might be solved better in some other way. However, if the "request" is an order, the training practitioner moves immediately.

(o) Rumor

A high-speed, sometimes accurate (some feel clairvoyant) source of information, the organization grapevine can give the tuned-in training practitioner clues to training needs which otherwise might never come to light. The grapevine or rumor mill among other things is a feedback medium. It reflects reactions of individuals and groups to past, current, or anticipated events viewed as affecting them personally in real or imagined ways.

Some of the information carried on a grapevine has pleasant connotations. It contributes to proprietary interest in the organization. Other information can cause needless worry and tension. Rumors fly fast. Absence of adequate knowledge about a proposal, or lack of understanding about a current policy or activity can affect morale, dissipate effort, create conflict, and otherwise reduce productivity.

An analysis of negative grapevine information usually reveals someone did inadequate planning, control, and/or communication. Training needs here are partly with those persons whose action or lack of action led to the situation which created the rumor.

(p) Statements

From time to time management, employee organizations, and responsible individuals make formal statements in meetings, from the platform, or in company or other publications. Read closely, these statements can suggest training needs, even though obliquely. The alert training practitioner will catch these "straws in the wind" and project their implications.

(q) Suggestions

Different in a sense from requests or statements, suggestions regarding training needs may come to a training practitioner informally, even spontaneously. They even may be framed as a question. Yet they are direct signals that someone feels a training need exists. Some companies maintain a "Coin-Your-Ideas" or other formal programme which encourages employees to make suggestions for the good of the enterprise. Some of these suggestions contain clues to training needs. In contrast to voluntary suggestions, the training practitioner can ask for suggestions, especially from foremen, supervisors, and other leaders.

(r) Symptoms

Any perceptible change in the function of an organization unit, in the behavior of an individual or group, in the environment of an activity may be symptomatic of needs which might be met in part through training. Thus clues to training needs may be revealed through an analysis of such symptoms. Negative symptoms sometimes stem from misunderstanding of policy changes or from plans initiated without adequate prior communication.

(s) Other Sources

Many other sources can be used to determine training needs. The training practitioner will select these as required. The terminal objective is to get as much information as possible bearing on the needs of an individual or group for additional knowledge, skill, or understanding.

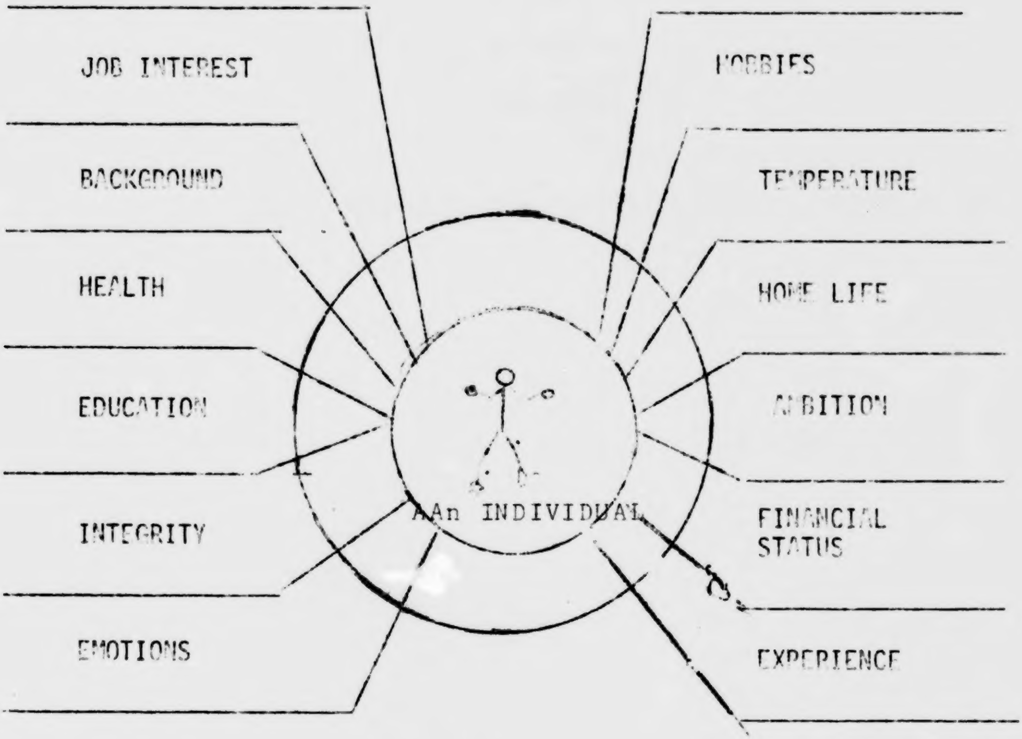
COURSE MANUAL FS. 3 - 5

FOCUS ON"

LEARNING THEORY, THE TRAINER AND MOTIVATING THE LEARNER

A. DIFFERENCES BETWEEN INDIVIDUALS

I. AN INDIVIDUAL


JOB INTEREST
BACKGROUND
HEALTH
EDUCATION
INTEGRITY
EMOTIONS
HOBBIES
TEMPERATURE
HOME LIFE
AMBITION
FINANCIAL STATUS
EXPERIENCE
An INDIVIDUAL

II. WHAT IS AN INDIVIDUAL?

Each individual has his TRAITS, CHARACTERISTICS, HABITS, BELIEFS, INTERESTS, EXPERIENCES-his strength and his weaknesses - good qualities and SHORTCOMINGS.
He is motivated by these Traits and Characteristics. They have a direct bearing upon him-upon how he does his job-upon how he feels about his job. The better you know and understand him, the better you will be able to work with him.

HE IS AN INDIVIDUAL

III. THE SENSES THROUGH WHICH WE LEARN

(i) SIGHT

We acquire most of our knowledge through the sense of sight. Observation of action and the study of drawings, diagrams, models, and pictures are indispensable in trade training. (The reading of the written word is considered to be more an act of hearing than of sight).

(ii) HEARING

By means of sound we learn of the experience of others. Hearing enables us to receive instructions and to recognize when tools and machines are being operated properly.

(iii) TOUCH

By touching things we become aware of the texture of materials, the degree of roughness or smoothness of surface, the shape of an object and whether it is hot or cold. Touch is frequently confused with kinesthesia.

(iv) KINESTHESIA

Kinesthesia is a sense which enables us to determine the direction and amount to gauge muscular effort. It is highly important in acquiring manipulative skills.

(v) SMELL

The sense of smell is important in some trades for recognizing materials, drugs and similar goods.

IV. SOME IMPORTANT FACTORS IN LEARNING IN WHICH INDIVIDUALS DIFFER

A good instructor knows that individuals differ just as much mentally as physically and he will accordingly use that particular teaching technique which is most suited to the learning ability of each student. Therefore, an instructor should recognize the following factors which influence learning ability.

(i) INTEREST

A person learns well those things in which he has a vital sustained interest. If he is bored or fails to see any personnel benefit in learning the lesson, then his mental process rebel and case to function. The instructor must stimulate interest.

(ii) INTELLIGENCE

Briefly stated, intelligence as a factor which runs through all problem solving. It is possessed by people in varying amounts. An individual may have a certain amount of intelligence, but he may not use that amount as effectively as he could. It is the instructor's job to get his student to use his intelligence to the maximum.

(iii) PAST EXPERIENCE

A person's background of experience forms the gramework into which is fitted additional knowledge. Thus the more extensive and varied the background the easier it is for a person to absorb new knowledge by associating it with what he already knows.

(iv) CONCENTRATION

A person cannot fix his attention on one idea for more than a few seconds. But if his mind wanders he may re-focus his attention quickly. His ability to do this repeatedly for some time is a measure of his "power of concentration".

(v) IMAGINATION

This is the power of forming pictures of absent things and situations. It enables the craftsman to visualise the finished job before he begins it. A man without imagination can never learn to read a blueprint.

(vi) WELL-BEING

Mental and physical confort increase one's power of concentration. On the other hand, pain, discomfort, and such emotions as grief, irritation, anger, and worry, greatly hinder mental processes The good instructor tries to put his class at ease in a cheerful frame of mind before presenting the lesson.

(vii) MEMORY

A person's ability to remember is extremely important in learning. The following factors influence memory: the clarity of idea in the person's mind the degree of originality of the idea; the frequency of the occurrence of the idea; the primary experience of the idea; the idea in the person's mind with which the new idea is associated.

(viii) SELF-CONFIDENCE

All other factors being equal, a person learns something better if he thinks he can. Fear of bodily injury, of failure or spoiling a job, and fear of criticism of humilation, make learning difficult if not impossible. The good instructor never purposely assigns a student a task beyond his ability to perform, nor says or does anything that would tend to make a student lose confidence in himself.

B. LEARNING THEORY AND THE INSTRUCTOR

The supervisor as teacher is more interested in *what* works than *why* it works. In this paper we will discuss some things that help learning and *hurt* learning. This should be of prime interest to the instructor.

(1) REPEAT, REPEAT, REPEAT?

For a long time it was thought that the best way to learn was by repetition. Now it is generally agreed that mere repetition, without any involvement, is not the most efficient way to learn. The student will retain the information longer if he somehow involved in working out the solution, or is rewarded for doing a thing right. This does not mean that repetition or drill does not help; it means that the trainee needs to get involved to the extent that he understands what is going on. For instance, if an employee is to learn to operate a machine, he is more likely to remember how if he knows what is going on at each step. Compare the two methods below:

(a) "Push the far righthand button. Pull the yellow handle until a high-pitched squeal is heard. Release the yellow lever immediately. Push the green lever and push the far lefthand button at the same time. When a thump is heard, release them both. Push the centre button one time......"

(b) "Push the far righthand button to turn the winch on. Pull the yellow handle to start the lift arms. When they reach the top and can go on further, high pitched "squeal" will be heard. This means the arms are straining against the top of the lift. Release the yellow handle immediately to prevent undue strain on the arms. The far lefthand button is a safety button that release the green lever. The green lever starts the winch line moving in. Press the button and push the lever at the same time. When the line hood is completely would in, there will be a "thump" as it hits the windlass. Release the green lever and the far-left button. The green lever is now locked in place. Press centre button to turn the winch off".

The idea is that, (1), repetition of the steps will produce learning, but the explanation in (2) of what is happening will enable the operator to learn and retain the information better. Drill is still required, but because the operator knows what the squeal and thump are, the drill is more meaningful.

(2) PRACTICE MAKES PERFECT

The old adage about practice is almost, if not completely true. One grave danger is that the practice may include errors; that is, it may not be directed towards perfection.. The employee may be practicing some wrong actions along with the proper ones.

For instance, suppose that a student learning about finance or economics is practicing changing money value from Present Worth to Future Worth. He uses the correct interest figure but the wrong conversion formula. If he repeats this on enough problems before finding out he is wrong, he may become proficient in solving the problems incorrectly. In this case practice makes perfect! Here again is the need for feedback. Both the instructor and the trainee could have stopped the error if there had been feedback soon enough.

Another consideration about practice is that, for a given amount of it, the student learns better if the practice time is spread out over extended intervals. Two hours of practice would generally result in better learning and recall if done in four 30-minutes sessions than in one straight 2 hour session (unless the operation required the full 2 hours to complete).

This means that when the instructor introduces to the group a subject that requires repetition in order for the student to gain the necessary sessions. Instead of just devoting a long class period to practice, he may want to schedule some practice in class, then make an outof hours assignment for more practice, and perhaps use some time the next day in a final check-out. Since the "forgetting rate" is highest immediately after learning, the instructor may require additional practice sessions soon after the training programme is over. He should be sure, of course, that the students know they are practicing correctly.

(3) STUDENTS SHOULD PRACTICE

Much of what we call practice; they should be saying the key phrases, they should be repeating the proper steps. Again, there is the need for active participation. The instructor asks the question; the students respond with the answer. They are not passively uninvolved, but actively involved in saying or doing the things they will need to say or do back on the job.

Teachers of public speaking often say, "Tell them what you're going to tell them, then tell them, then tell them what you've told them". That technique has a definite place, but that place is not the classroom. It would be better to say, "Tell them what you want them to tell you, let them tell you, then let them tell you what they've told you."

(4) STUDENTS DIFFER

Because there are so many variables involved, it is difficult to lay down firm rules for the instructor to follow in the classroom. The major variable is, of course, the student. No two are alike, no two come with identical backgrounds of education and experience. Even if they did, their ability and capacity to learn would be different, so they still could not be treated the same. Some already have the foundation for a subject; some lack it, but grasp things so rapidly that they present no real problem; others lack the background and learn slowly.

If the instructor has trainees with all of these backgrounds and qualities in the same classroom at the same time, he may have an insurmountable problem. He may simply decide to aim for the good of the most people - and the company - and start out. The lowest and highest achievers will suffer the most. Outside help will benefit the slower learner interested, but at best the wide variation is an unfortunate handicap to the instructor.

(5) THE STUDENT'S NEED TO KNOW

One of the strongest factors influencing the trainee is his need to know when he is right. Short quizes will give him important feedback, because he can check his thinking and action against the correct answers. Nothing seems to motivate a person more than being right, so the student who succeeds and knows it will be motivated to repeat his success.

The alert instructor will give all students ample opportunities to find out that they are right. Not only frequent short tests, over entire units will help the students know where they stand and whether what they are doing is correct. Allowing the class to come up with an obvious conclusion gives them feedback and reinforcement on a correct method of solving a problem. Writing their answers on the board allows them to see and know the results, and keeps them involved.

(6) FROM KNOWN TO UNKNOWN

People learn new information best when it is developed from information already known and accepted by them. The way to arrive at facts not previously known is by way of facts already established. Forcing the trainees to "unlearn" things they have accepted for some time is a difficult way to teach. While it is necessary occasionally, it should be avoided if possible. One way to keep from "losing" students is to teach the new way without confronting them with the necessity of forgetting about the old way.

The instructor who comes in and say "I know you've all been doing this a certain way, but you can just forget that because I am going to show you another way, "is really inviting rebellion in the minds of trainees. He would be better to lead them along, with their participation, to a correct solution based on what they know, but with a newer approach. After they have practiced the new method and feel at ease with it, they will be less interested in holding to the old way. The emphasis should be on doing the job better-not differently.

(7) RELATE FACTS TO IDEAS

Another concept in going from the known to the unknown is to relate the new facts to a known idea. The idea may not even be related to facts themselves. The Parables were good examples of this.

For instance, a switching system that scans many different inputs might be described as "a champion chess player with many chess board around him.

He moves from one board to the next and remembers how the board looked the last time he saw it. If there have been any changes, he knows he must do something: if not, he moves to the next board. The scanner in the switching system is like the champion who moves from one board to the next. The memory store is like the mind of the champion........"

By relating new information to something that is familiar to them, the students can grasp even a complex switching system fairly easily. The chess player has no real relation to the switching system, but he provides a convenient handle to tie the facts to. The alternative would be to describe the parts without relating them to anything familiar to the trainees: "The scanner does thus and so; the memory store performs this or that function".

Pity the poor emplyees who are confronted with an instructor who reads or states fact after fact with no tie-in to anything familiar. While the students' minds wander, completely unable to retain or understand the facts, the instructor quotes statistics, then facts about the statistics, then figures to back up the facts behind the statistics. Even the prolific note-taker is lost because he sees no particular organization to the flood of facts. Soon all he has is a page full of incomprehensible information. The instructor might have said, "Picture a large pie cut down the middle. One half represents the amount spent for salaries last year. The other half is the overhead, profit, etc. Now cut this last piece into three equal parts...." With this picture in mind the students can draw their own visuals. They have an easy figure to tie the facts to and are much more likely to grasp (and remember) the information being taught.

(8) A PLACE FOR EVERYTHING

None of us likes "loose facts, facts that don't seem to belong anywhere. Just as people learn better when facts relate to something familiar, they also learn better when the facts relate to each other. That is why information is usually presented step-by-step, so that every part relates to the whole and to each of the other parts.

Poorly organized material can cause the instructor to present facts out of sequence or in an unrelated manner. The resulting learning will most likely be a disappointment. We understand this in teaching children, but we forget that the principle applies to adults as well. The child who easily learns to count "5, 10, 15, 20........" would have difficulty in learning a sequence such as "3, 17, 10, 13.....". The employee who is now a student finds equal difficulty in learning a lot of unrelated facts such as "15,000 rpm, designed by Acme, 152 salesmen, $5,83 for the replacement clutch.......".

(9) TOO MANY WORDS SPOIL THE......

We have seen that words are codes by which we transmit facts, concepts, ideas, etc. Without more feedback than is generally available in the classroom, it is difficult to know when the message has been "decoded" correctly. To overcome this handicap the instructor may continue to send more of the same code (in other words, keep talking). Ideally, he should cut off when the message has been understood. But this is rarely the case: he may cut off too soon, or he may go on talking after the correct lorning has taken place.

Cutting off too soon is obviously frustrating to the student. He is, in effect, left standing on the threshold of understanding with the door closed in his face. Feedback will tell the instructor when he has stopped teaching too soon. If the trainees are lucky, he will have another chance to fill in the gap for them.

But what if the instructor talks too much? Unfortunately, normal feedback will not help here. There is no way of knowing just when "the light dawned" for the student. There is evidence to show that the students get as frustrated when the instructor talks beyond the learning point as when he stops short. Further, the things the instructor says beyond the point of first understanding may even confuse the students, since they will not be listening or concentrating as well from that point on.

Another difficulty here is that the instructor can be pretty dogmatic about how much the trainees should hear and just how much they need to hear before they can understand a subject. The instructor may even ignore feedback which gives positive evidence of correct learning because he has prepared a longer lecture, and "known they couldn't understand this quickly". A good instructor should be just as willing to stop early as to work overtime. After all, it's learning he's looking for, and when it takes place, his work has been accomplished.

(C) WHAT IS LEARNING?

Psychologists cannot explain exactly what happens when learning takes place. There are theories, of course, and much research is being done. One thing is certain; learning is change within the individual, not something that is "done to him". In a classroom, the instructor does not transmit learning. In a sense he actually does not teach the student, although the expression is all right when understood in context. Whatever happens, the student controls the results. The teacher provides the classroom environment, the facts, the stimuli, perhaps even the motivation, but learning takes place within the student's mind.

The point of all this is that instructors sometimes feel that because they have provided an ideal learning situation, learning has taken place. Such may not be the case. The instructor who is amazed when an employee doesn't know something and blurts out "but don't you remember - I told you.........." demonstrates that he doesn't realise that telling is not teaching. For classroom definition, at least, learning takes place when the student gets involved enough to readjust what he already known and can do to include the new information, the new skill. Anything short of this is not satisfactory learning, hence not satisfactory teaching, especially if all or most of the students fall short of this objective.

Examination is a selection process designed to test the progress of leaning. It is however used in many of our schools as a persecutor of leraning or a crucifying agent of learning.

(D) SOME ASPECTS OF LEARNING

Learning has been described as a relatively permanent change in behavior that occurs as a result of insight, practice or experience. Learning may be simply an addition (new information); it may be a subtraction (unlearning a bad habit); or it may be a modification (adjusting new knowledge to old). Learning as change may be for the better or for the worse: we learn bad habits as well as good ones. Learning may be conscious or unconscious: we take courses in the English language but we unconsciously acquire styles of speech and gesture from family and friends.

Learning is such a complicated process that no one can really claim to know how it occurs. We do know that learning takes place more readily in some circumstances than in others, and that it can to a great extent be influenced. To facilitate learning, a teacher needs to understand the various factors which bear upon the learning process.

(1) Motivation

Perhaps the most important factor in learning is motivation to learn. Experimental evidence indicates that little learning takes place in the absence of motivation. What motivates one person to learn may, of course, be quite different from what motivates another. For some people, it is interest or challenge of the task (intrinsic motivation); for others, it is the anticipated reward or punishment (extrinsic motivation, e.g., money, certification); for still others, it is the need for recognition or status. Up to a point, the stronger the motivation, the more learning takes place, but beyond a critical level, the learner becomes too anxious and tense to learn effectively (some of the energy that has been aroused is spilling over in tension, which disturbs learning).

Perhaps we should consider the human needs to be satisfied in order to have a better understanding of motivation. It was the psychologist, A.H. Maslow, in his book Motivation and Personality, who described a theory of satisfaction of human needs extending in hierarchical form through five levels. He said that at the first level are the basic physiological needs: food, shelter, sex. The next level he described as safety or security needs, the need to protect oneself from threatening factors. The third level, he suggested, consists of the "belonging" needs, the need to have association with others rather than be isolated. He indicated the fourth level to be status needs, the need to have self-respect and a feeling of importance. The top level need, according to his theory, is that of achievement of selffulfilment.

Maslow makes the point that when a need has been satisfied, it is no longer a need. Take the example of air. If one is deprived of air, then the human being is required to satisfy this need and he is not interested in trying to satisfy higher level needs. But once the need is fulfilled, it is no longer a need and the individual is motivated to try to satisfy the next level of need. After the basic and security needs are met, the higher level of needs play an important part in motivating the student to learn effectively.

Teachers and instructors should have an adequate understanding of the part that "needs satisfaction" can play in effective learning, from the basic problems of participant comfort (lighting, seating and ventilation) and fatigue (the timing of training) to an awareness of trainees' need to feel accepted and respected by colleagues and by the instructor. If these needs are met in large measure, participants will be more likely to try to satisfy their needs for creativity and self-fulfilment in the learning experience.

(2) Stimulus, Response and Reinforcement

Motivation alone will not produce learning, however. Attention has to be given to the particular stimulus, to the checking of the accuracy of the response, in a rewarding situation. Rewarded behaviour is learned and tends to be repeated under similar conditions in the future, whereas non-rewarded behaviour tends not to be learned. Once we observe or discover the things that are reinforcing (rewarding) to a trainee, it becomes possible to shape his behaviour by reinforcing the desired responses.

Reinforcement and reward are always important aspects of the learning process. Evidence seems to indicate that the more frequent and prompt reinforcement is, the more effective learning will be. If the teacher has a genuine interest in the trainees, he will seek active ways of rewarding successful responses. A kind remark is a reinforcer, or a personal compliment, or sometimes, simply personal attention. Success is also a great reinforcer, perhaps the best. As the old adage says, "Success breeds success". In self-discovery techniques and programmed learning, success is a built-in reinforcer and motivator for learning.

(3) Feedback, or Knowledge of Results

Of course, in order to learn effectively, the learner needs to know if he has been successful: this may be confirmed by the instructor, by the reactions of his colleagues, or by the learning situation itself. The more the learner knows about what he is doing, the more rapidly is he able to make improvements in his performance. This is the important principle of feedback, or knowledge of results, and it is the most common and probably the single most important source of reinforcement for the human learner.

For feedback to be effective, it should be given as soon as possible. We shoot at a target and observe the result: there is immediate feedback to correct and reinforce the learning. If feedback is delayed it is more difficult for a learner to determine which of his actions led to a successful outcome.

If the learning situation can be arranged so that the learner is given a series of intermediate goals, and is provided with constant, precise feedback as to his progress, this helps to maximize the effect of this principle and helps avoid boredom. The case study, role play and discussion methods are good illustrations of learning by early feedback; similarly with business simulations where the results of decisions are feedback to participants immediately, providing useful information for new decisions.

The best method for feedback is seen in programmed learning, where immediate reinforcement follows the participant's response to each new segment of information.

(4) Participation and Practice

Experiments prove that the more a trainee participates in the learning situation, the more effective will be the learning, particularly where he is learning a skill. If the learner is not called upon to respond actively, there will be fewer opportunities to check the accuracy of the response and provide feedback for control and reinforcement. Participation also means practice or repetion of the behaviour to be learned, which is necessary for remembering and for transfer of the classroom learning to the real life situation.

most trainees need to repeat the behaviour several times before they remember it. Repetition needs to be carried well beyond the first perfect performance - the principle of "overlearning" - to consolidate learning and offset the effect of forgetting. This need not mean a great deal of repetition all at once, but may entail a certain amount at intervals. Follow-up exercises, review and refresher courses also aid memory and transfer.

(5) Transfer or Application of Knowledge

From experience, we know that learning is easier when we can see its relevance or applicability to our own situation. Wherever, possible, there should be a close relationsip between the training programme and the work to be actually performed. Obviously, if procedures for machine maintenance are being taught, they should be those currently used in the company. For management skills, business simulation, case studies and role-playing appear to be the best techniques for positive transfer, providing they are realistic and appropriate to the level of trainees.

The opposite effect is demonstrated when trainees return from a course full of ideas only to find themselves prevented by top management from trying out the new procedures they have learned. Similarly, if human relations principles of the democratic variety are taught to students who will return to an autocratic situation their learning will have been in vain. If we cannot apply what we learn, we tend to forget it.

(6) Perception

Perception is what gives us our ability to observe the world, which is revealed to us through our five senses. We "perceive" when we:

- recognize (objects, sounds, tastes, smells, feel)
- discriminate (between colours, facts and fallacies).

- relate (parts to a whole, like objects to each other, a principle with its practice);
- select (what interests us or what we should focus our attention on).

Most important of all, perhaps, perception is what helps us to use the knowledge we have in an entirely different situation from that in which we learned it. For instance, I may have learned to use a knife to cut with, but I might subsequently use it to remove a cork from a bottle, open the lid of a tin, to turn a screw, or to paint a picture. Perception is such an important thing that many modern toys for children are designed to develop these qualities.

Perception operates from the most concrete to the most abstract levels and very often perceiving a relationship at one level will help us to perceive new material at another level. Thus, audio-visual aids, simplified models, graphic symbols the use of examples and analogies all help to engage our perceptions and transfer/apply them to new situations.

A teacher also relies on the perception of the learner when he arranges the material so that it makes sense to the learner and allows him to build up a coherent structure easily. Research shows that to a surprising extent, better results are achieved by tackling a task as a whole rather than in a series of small sections that have little logical relation to each other. If the steps lead logically from one to another, and hang together in meaningful units, learning is facilitated. Instructional material may also be organized by:

- moving from the known to the unknown;
- progressing from the simple to the complex;
- relating the material presented to present tasks.

To influence the perceptions of other people, a trainer must attempt to understand their perceptions and relate the material to their understanding. Learning will be to no avail if the instructor is not realistic in discussing his subject in relation to the students' background and experience. Unless the learning is a meangful experience in terms of their needs and aspirations, they will not learn as effectively and they will not make effort to apply the knowledge and skills to their various jobs. Subject matter should be related to their:

- background (aims fears, problems, satisfactions, social and economic needs, health, age, experience);
- education (level of education, knowledge of the subject or related subjects);
- abilities (capacity to learn - for instance, rate and amount of learning, capacity to do certain things, e.g., mechnical ability).

Of course, there are also individual differences with respect to trainees' skills, motivation, previous experience, intellectual capacity, attitudes and working habits, so that no two people will perceive information in exactly the same way. Self-instructional methods such as programmed learning, where the learner goes at his own pace, the discovery method, or individual assignments and projects are therefore very valuable in making individual learning more effective. However, it is frequently more expedient to give training to groups and in this situation, it is clear that leaning will be more effective if the levels of previous skills, native intelligence, etc., are not too diverse. Proper selection of students for a course is necessary in this case.

As we grow older our perceptive processes become more and more complicated as we receive an ever-increasing amount of information. What happens to this information when we receive it? It is either stored or forgotten, depending on such things as whether it is interesting or necessary, useful or not, understood or not, etc. High motivation or interest in learning, active participation in and sufficient practice of the learning, its relevance and applicability to trainees' current jobs will all act to offset forgetting and thus these various factors in the learning process become doubly significant.

(7) Setting Training Objectives

In formal procedures of instruction, experiences are organized to accomplish specific learning (changes) within a restricted period of time. In this situation it is essential that a teacher clarify precisely what learning and unlearning he wants to facilitate, and let these objectives serve as a clear focus for his whole training programme. Specifically enumerated objectives (in knowledge, skills and attitudes) should indicate what material must be taught and will also effect the choice of teaching method. The trainee himself may learn more effectively when he has clearly defined goals towards which to work. A training programme should set forth goals or objectives in terms of:

- the job to be performed;
- the conditions under which it is to be performed;
- the level of proficiency required.

(8) Summary

The more a trainer can arrange the learning situation so as to utilize these principles of learning, the more likely the learner is to learn. Thus, a training programme, or a teaching technique, will be judged adequate to the degree that it appears likely to:

- provide for the learner's active participation;
- provide the trainee with knowledge of results about his attempts to improve;

- promote by good organization a meaningful integration of learning experiences that the trainee can transfer from training to the job;
- provide some means for the trainee to reinforce appropriate behaviour;
- provide for practice and repetition when needed;
- motivate the trainee to improve his own performance;
- assist the trainee in his willingness to change.

Learning is a life-long activity; we are never too old to learn, but we are frequently resistant to change. People often talk about problems as if they safeguarded their position, e.g., "There are so many problems I cannot change". What they mean is, do not remove the problems or I might have to change. Learning is change.

(E) Some Objectives for the learner

Absorb knowledge
Develop skills, (numerical verbal, perceptual, critical, physical, social, etc.)
Arouse interest, motivate

Modify attitudes
Break down prejudices
Become more independent from authority
Adopt framework or concepts
Ability to analyse complex situations
Ability to sift and evaluate information

Make better decisions
Communicate more clearly
Understand others better
Understand self better
Obtain feedback on his progress

Facilitate collaboration with others
Improve clear thinking and behaviour under pressure
Make concentrated attack on problem
Ability to plan ahead increased
Increased ability to conceptualise
Incentive to develop self

(F) TEN SIMPLE RULES OF LEARNING 1/

1. The Capacities of learners are important in determining what can be learned and how long it will take

The implication of this principle is that trainers should know their audiences. Bright people can grasp a complex message that is over the heads of the less bright ones. And they grasp significance of a simple message in less time.

2. The order of presentation of materials to be learned is very important

Points presented at the beginning and end of the message are remembered better than those in the middle. Thus, if four reasons "why" are given in a series of copy, the two most important points should be given first and last.

3. Showing errors in how to do something can lead to increases in learning

The effectiveness of a demonstration might be increased by showing not only "what to do" but "what not to do". Thus, to show how not to do". Thus, to show how not to use a product and also how to use a product may be very useful.

4. The rate of **forgetting** tends to be very rapid immediately after learning

Accordingly, the continuing repetition of the training message is desirable. It usually takes a lot of repetition in the early weeks of a programme to overcome rapid forgetting.

5. Repetition of identical materials is often as effective in getting things remembered as repeating the same story but with variations

Psychologists term this identical vs. varied repetition. Using training films they have failed to find significant differences in learning, after employing a lot of different examples versus repeating the same few again.

1/ from "ILO MAN DEV Manual: "no. 36, p. 2-5.

6. Learning is aided by active practice rather than passive reception

   This point is of great importance. If you can get your audience members to "participate" in your presentation, they are much more likely to remember your points.

7. A message is more easily learned and accepted if it does not interfere with earlier habits

   Thus, a training theme which draws on prior experiences of the audience will help the learning of the message.

8. The mere repetition of a situation does not necessarily lead to learning. Two things are necessary - "belongingness" and satisfaction".

   Belongingness means that the elements to be learned must seem to belong together, must show some form of relationship or sequence.

   Satisfiers are real or symbolic rewards, as distinguished from annoying consequences that may be present in the learning process.

9. Learning something new can interfere with the remembering of something learned earlier

   This is most important when the learner is being asked to change his habits or methods of work. For example, if you study French for an hour and then study Italian for an hour, your ability to recall the French will probably be less than it would have been had you substitute an hour's interval of rest in place of the hour's study of Italian.

(G) THE PSYCHOLOGY OF ADULT LEARNING

1. Who really is the adult learner?

   In adult education, the concept of the adult refers neither to chronological nor biological age. It is a social conception. Otherwise, most universities would be adult education institutions.

On the nature of adulthood two criteria are normally used:

(i) From the individuals point of view, adulthood means independence; for example, marriage and financial self-support. In this regard, it is assumed that he or she has his or her own family (with or without children) and that he or she is employed full-time.

(ii) From society's point of view, adulthood implies acceptance of social responsibility - the individual's ability to assume adult roles, for example, the family roles of husband and wife and father and mother; and the work role of being a full-time worker. Hence the strong view that adult education is part-time education. However, there is nothing in the type of education per se which makes is part-time. In fact [illegible] full time when there is a need for occasional wholesale retaining of personnel. 1/

II. The need for a knowledge of adult learning:

A good teacher of children needs a sound knowledge of child psychology, so must a high school teacher know adolescent psychology. A fortiori, a good teacher of adults must know adult psychology and keep abreast of new techniques to adult education.

III. Three obstacles to be recognized

As training officers or staff Development Officer, we must recognize the main obstacles that we may have to overcome in achieving our objectives. In most countries, (i) people generally are yet to be convinced of the fact that education

---

1/ Professor E.A. Tugbiyele, at the Conference for Training Officers on THE ADMINISTRATION OF TRAINING PROGRAMMES, conducted by the Continuing Education Centre, University of Lagos, 21-23 January 1971.

is a lifelong need; (ii) many people think they cannot learn after they have grown up; and (iii) in many countries, adult education programmes are either not appropriate to the needs of the community or the organization, or in the programmes conducted, teaching methods are poor.

IV. Why Adults learn

Why do our students attend our course, seminars, conferences, workshops, special lectures, etc.? Briefly, the following are some possible reasons:

(i) Generally to achieve goals for more enriched living and to achieve progress within the establishment.

(ii) To secure higher-paying and more satisfying jobs.

(iii) To know how to carry out some special responsibility e.g., as foreman, local government officer, trade union leaders, supervisor, or manager.

(iv) Some, simply because they enjoy learning.

(v) Some enrol for social, not education reasons.

On close examination adult learners may be classified into three groups:

(i) The "goal-oriented" - "those who use education as a means at accomplishing fairly clear-cut objectives. These aim of achieving progress on the job, or at improving themselves in some specific ways. Each activity is selected on the basic of whether it would meet the specific goals envisaged.

(ii) The "activity-oriented" those who take part because they find in the circumstances of the learning a meaning which has no necessary connexion at all with the announced purposes of the activity". Although the objectives of the training programme may be defined by the Training Officer, members of this group are interested primarily in taking part, not necessarily because of the intrinsic value or content of the activity per-se. They may want to avoid loneliness at home, or they may attend in order to meet people and make friends. Some may be looking for marriage partners, while others may be seeking a means of escape from what one "calls" a basic personal problem or an unhappy relationship".

(iii) The third group is the "learning-oriented" - those who seek knowledge for its own sake. Their main aim is the desire to know, and every minute they can spare is devoted to education of some sort - reading, serious radio and T.V. programmes, conferences, seminars, etc.

While we bear these various characteristics of adult learners in mind, it must also be stressed that other characteristics are common to all - they are all continuing learners, they all have goals, all enjoy participation in adult education programmes and they all like to learn. The difference between them is their conception of goals and aims, and their ideas about purposes and values of continuing education. We must also be reminded that the groups are not entirely exclusive either. Among them some are on the border between two marked groups; and sometimes, members of the three groups may be attending the same programme for various distinctive reasons.

V. Motivating the adult learner

Training officers are teachers as well as learners, and in working with trainees, this often-forgotten but stubborn fact must be borne in mind. Another fact the training Officer must bear in mind is, of course, that most of his students are adults.

He must also understand some basic concepts in adult education. First and foremost, the teacher of adults - no matter his title, status are academic qualifications - must always remember that he is dealing with adults who must be assumed to be his social equals and with whom he must work on a level of mutual respect. His main work is to provide guidance. If he is too authoritarian, he may soon find himself in an empty classroom, or where trainee must attend in order to retain their jobs, he may only succeed in constituting himself a laughing-stock. He must be sensitive to his students and be concerned with the progress of individual students.

He must be constantly alert to differences in students' interests and experiences, and be ready to encourage and assist each individual according to his need to achieve greater self-direction. To do this successfully, he must know the background - social, economic, academic etc., of each student. A good practice is to have some sort of individual curriculum vitae completed by students on some pro forma (prepared by the teacher) at the beginning of the course. The pro forma may include such items as the following: Name, Home Address (and telephone - if any) Place of Birth, Age, Certificates or Degrees Held (if any), previous Work Experience (with dates), etc. In some cases, it may be necessary to know the student's current salary and description of his current responsibilities, as well as previous training programmes attended. However, students must be assured of the confidential nature of all information supplied.

Let us emphasize that it is not sufficient for the teacher to know his students. He must also know his subject, and continue to keep up in it through magazines, learned journals, new books, attendance or refresher courses seminars, workshops, conferences, public lectures, symposia, debates, etc. He must also study related subjects as well. Now-a-days, he must, in particular, try to familiarize himself with the behavioural sciences. Preparation for each class period or meeting is a necessary for adults will quickly detect when the teacher is fooling or bluffing.

Teaching, and more so adult teaching is, not the job for a lazy person. Anyone who feels that he has "graduated" or "completed" his education should not be allowed to teach. The rapid outdating of knowledge which is an important characteristic of our times has made continuing education a necessity for everyone. Besides, and this is very important to remember, the quality of adult students will continue to improve and the same teaching materials, methods and techniques will neither meet their needs nor satisfy their expectations.

VI. Motivating the adult learner - some myths about learning

Perhaps one of the major factors responsible for poor motivation in adult teaching and learning is the belief of many educationists in some common sense fallacies about learning. In fact, these fallacies are really a nonsense. They are myths. They consist of unproved assumptions which have misled many for ages. The following are some of them:

(i) That "you can't change human nature", But experiments have shown conclusively that human nature can change. Hence we have the theory of social telesis - that it is possible for society to attain certain values or ends through deliberate planning designed to achieve such ends or goals. Human nature can change. Attitudes can change, human beings can be reformed - hate may be changed to love and hostility to goodwill. Indeed, human behaviour human personality and human nature can be reshaped. "One of the miracles of humans" someone has said, "is the extra-ordinary capacity of men and women for change and growth".

(ii) That "you can't teach an old dog new tricks". Even with dogs this is a lie. It is now well-known and accepted by educational psychologists that "the chronological age of an adult is secondary to other identificable individual characteristics that bear upon learning and retraining"; and that for many if not for most tasks, years of education is a more relevant variable from chronological age.

(iii) That "it is more difficult to penetrate the heads of adults". The fact is that adults learn certain subjects - where experience may be a useful factor - faster than youths while youths do better in such subjects as mathematics and physics.

(iv) That "unless a person has a high I.Q.. he cannot be taught". With the exception of morons and idiots (and these are not likely to be found in the middle and higher echelons not establishment), attention must be drawn to the fact that intelligence tests are imperfect instrument and that they should be used with caution. To be of some help, intelligence tests must be specially designed for the particular community in which they will be used.

VII. The syllabus or course outline

"The preparation of the syllabus is the beginning of the teaching". If a syllabus (or course outline) does not relate or appear to relate to the needs of adult students, then much is wrong from the very start. Students normally understand their needs in terms of whether the programme has some remote or immediate, direct or indirect relevance to their individual and personal progress or interests. As much as possible, prospective students should be consulted when they syllabus is being prepared. If this is not directly feasible, a machinery must be devised to know what may be acceptable to students. By knowing their wishes and interests, it should be easier to have a syllabus that would satisfy their educational or other needs. Before the syllabus is drawn up, the main objectives of the course or programme must be defined and the target group ascertained. As a general rule, one should avoid a syllabus that is too ambitious for the time available or the group of participants expected. Most training officers, including experienced ones, err on this matter of syllabus and time-table.

A good syllabus should contain a book list. The list should be divided into various categories, e.g., (a) Textbook or textbooks, (b) Necessary or Required Reading, and (c) Optional Reading. Chapters and pages of books should be given when possible. During the first class meeting, the teacher should comment on his book list - giving the author's background, objectives of the books and what others have said about the books. Students should be told where the books are available, the prices, names of publishers, etc. Recommended books should not be too expensive or too many for the group envisaged.

(a) Inattention

On the average, it is more difficult to secure the undivided attention of adults to the lesson that it is to secure the attention of youths. An adult class is normally not a "captive audience" - as a regular university class. The lesson must therefore be made very interesting. The language of the Instructor must be simple and clear. Different techniques facilitating students" participation must be used. While the atmosphere must be kept informal, too much informality must be avoided. It is a sign of weakness on the part of the instructor formally to solicit attention.

(b) Suspicion

An Instructor who avoids controversy or is seen by students to be in the habit of avoiding contentious subjects may be open to suspicion, and sometimes to open hostility. The Instructor should not avoid controversial issues. Rather, he should learn to deal effectively with controversy. Discussion should be free and objective, and it should be relevant to the matter on hand.

Efforts must be made to avoid shifting discussion to moral rather than the scientific basis.

Many other aspects of adult learning can be discussed e.g., the problems of evaluation, poor attendance and drop-outs. However, I must close this talk with some specific hints and suggestions for the Training Officers.

VIII. Some specific hints and suggestions

In teaching adults, the following hints and suggestions should be borne mind:

(i) The adult's time is very previous and has far less time for study then regular university and other grades of students. Lengthy assignments should therefore be avoided, and books assigned should be available in the community.

(ii) The difficulties encountered in teaching adults are of a different kind from those encountered among regular university or high school students. It is therefore esssential that the teaching techniques must be accordingly adopted.

(iii) The teacher must constantly remember that the adult has one previous and unique ingredient which he brings to the classroom: namely, EXPERIENCE.

(iv) Let us repeat that with the exception of tutorial classes, the adult class is not made up of a captive audience. There are no compulsive or coercive elements. It is often an act of free will, and the teacher must take the discussion or programme sufficiently meaningful to be worth attending. The teacher of adults will have pupils only if he meets their current needs and is able to interest them sufficiently to evoke the will to learn.

And we have said that even where students must attend, the Officer will only succeed in making himself a laughingstock!

(v) Classroom atmosphere should be kept as informal as possible. There should be plenty of discussion and individual conferences with students outside of class. However, the teacher must not rely upon the student as his only source of help in teaching. It is probably fallacious to assume that what the student says he likes it always what contributes most of his education. As much as possible, the teacher must avoid forced informality.

(vi) Seek the advice of colleagues, Discuss your teaching methods with them. One advantage of this is that one may discover that one's teaching problems are not unique. Also, one can learn about the techniques that others are using. This can be done through discussions, observing others, reading and contributing to journals and magazines, and attendance at seminars and conferences.

(vii) Students should have the freedom to express themselves - even to criticize the teacher in a polite manner.

(viii) The training officer should not be over-ambitious. He should not think for the group or about the group, but with the group. It is a waste of time to rush through a lesson or syllabus merely to cover it.

(ix) Avoid the tendency to indoctrinate. There is a difference between teaching and indoctrination. The teacher must remember that he cannot always be a final authority. He must be humble and maintain some balance and intellectual integrity.

(x) Where appropriate, excursions should be encouraged. However, adequate arrangements must be made prior to the actual excursion.

(xi) Teaching must not be theoretical. Demonstrations are invaluable e.g., someone could demonstrate how to handle specific situations how to chair a discussion, how to conduct a conference of investigate the causes of a grievances, etc. Role playing, in-basket exercises, case study and other similar teaching methods, could be used, depending on the type of programme. In the process, the teacher must stress the fact that mistakes must be expected and that a constructive analysis of such mistakes would also be used. Audio-visual aids could be of immense help e.g., tape recording, Slides, film shows, pictures, maps, flannelgraphs, etc. When films are used, the films must be pre-viewed, by the Instructor.

(xii) While informality must be encouraged the risks in too much informality must be carefully avoided.

(xiii) There must be flexibility in content and methods but such must take place with sequence and orderliness.

(xiv) For adults there is no "correct" answer, e.g., in the sense that the answer can be verified to the point that doubt or uncertainity is removed. Also, solutions to the adult's problems are likely to have effects on other persons. Often some of his problems which could be "solved" theoretically might be impossible of solution practically.

(xv) It should be borne in mind that the expectations of the "student" and "teacher" may be different, and that such could lead to conflict and tension.

(xvi) A sense of humour and enthusiasm is an indispensable characteristic to the good adult teacher. Besides, he must have imagination.

(xvii) The teacher must occasionally ask himself: How much do I know about myself? He must constantly learn about himself e.g., what motivates him, the consequences of his behaviour on others and that of others on him. For example, has he developed the ability to listen? This is a vital quality we must all develop. Is he clear in speech and writing? Does he make himself easily understood?

(xviii) It is interesting to note that there are no significant differences between the sexes at any time during adulthood.

(xix) Adults with less education tend to be less tolerant for groups other than their own. Also, they tend to be dogmatic and to hold more authoritarian attitudes.

(xx) Class presentation can, and should take various froms - lectures, demonstrations, experiments, questions, individual work, etc., - and monotony should be avoided.

(xxi) Teachers whose only experience was with children, a adolescents or "day" university students should not be asked to teach adults without further specialized training. Unless he knows it already, a newly-employed Training Officer - be he a University Professor - must learn adult psychology and adult teaching techniques. If we may add, at the risk of repeating the obvious, it must be remembered that desks and many of the other physical facilities built for children are inappropriate for adult learners.

(xxii) In closing, let us warn that anyone who has lost the capacity for learning should not be a teacher of adults. Every good teacher, like every good doctor, must keep up to date.

QUESTIONS FOR SYNDICATE DISCUSSION

(a) What is motivation?

(b) What would you bear in mind in motivating the adult learner; and

Teacher-learner relationsip 1/

I. THEORY INPUT

The way a teacher runs his or her classroom does not "just happen". Instead, a teacher's behaviour is determined by his or her beliefs about the real world. One set of beliefs centers on aspects of the "psychological contract" between teachers and students. The other set of beliefs centres on aspects of the "psychological contract" between teachers and the educational system.

Basic assumptions

First, what a teacher does in the classroom reflects some basic assumptions and beliefs about students and learning. Every teacher's behaviour reflects his or her personal answer (voiced or unvoiced) to the question "Do you really believe that people want to learn and are capable of taking responsibility for their own learning or that that they need to be coerced or seduced into receiving an education?". Thus, a teacher who gives frequent "pop quizzes, "reviews students' notebooks to be sure they are taking notes, and checks of homework assignments reflects certain beliefs about student's attitudes toward learning - as does a teacher who is friendly and easy-going in his approach.

1/ By Morris S. Spier

Second, a teacher's behavior also reflects voiced or unvoiced answers to questions about a teacher's role in learning process. Teachers who emphasize planning and organizing course content, meeting with students, and designing new approaches to class material reflect certain beliefs about the expectations of their administrators and the educational system. So do other teacher who emphasize personal expertise, respect, and setting an example for students.

In the SCTI, a teacher's assumptions and beliefs about students' attitudes toward learning and how a teacher should respond to students' needs are measured by the S scale. A teacher's assumptions and beliefs about his or her role in the classroom are measured by the C scale.

Both orientations, of course, exist simultaneously in the behavior of every teacher. A teacher can be highly student oriented and highly content oriented at the same time. It is a teacher's philosophy that determines the emphasis he places on each orientation. Other teachers, while also feeling that a conflict between incompatible needs is inevitable, work toward some compromise or balance in which neither orientation is fully emphasize Still other teachers see the student orientation and content orientation as functionally related. They aim to integrate studen and system needs by emphasizing both.

II. FIVE TEACHING STRATEGIES

Five "pure" teaching strategies (or styles) result from (1) the interaction of the student and content orientations, and (2) the differing degrees of emphasis which teachers place on each orientation. The five styles are discussed below and are visually depicted in Figure 1 "Models of Teaching Strategies" (adopted from Blake & Mouton, 1964).

Strategy 1

The strategy at the lower right-hand corner of the diagram defines the style of a teacher whose basic philosophy dictates that student and system needs are mutually exclusive. Thus, this teacher resolves the conflict by placing maximum emphasis on content orientation, and minimum emphasis on student orientation.

For this teacher, the syllabus defines what should be taught; the length of the term governs the time available. Since students naturally resist school and learning, a teacher's primary responsibility is to make sure the materials gets taught. It is important to set definite standards of classroom performance and to check continually to see that students are meeting the standards. This is accomplished by giving frequent "pop" quizzes, taking attendance at all classes, constructing some test questions from minute points contained in footnotes in the text, and so on.

Strategy 2

This teacher, whose strategy appears at the upper left-hand corner of the diagram, also feels that student and system needs are incompatible and in conflict. Like his Strategy I colleague, he feels that students really do resist school and learning. But he disagrees that the basic need conflict can be overcome by tight classroom control. Instead, this teacher places maximum emphasis on student orientation, and minimum emphasis on content orientation.

Students will be taught by teachers they like so being likes is both practical and personally gratifying for this teacher. He feels that a teacher's primary responsibility is to be supportive and to win the friendship of his students. This is accomplished by putting on a "good show" in the classroom, ignoring attendance, allowing students to set their own course grades, inviting students to his house, and so on.

Strategy 3

Like his Strategy 1 and 2 colleagues, the teacher whose strategy is defined in the lower léft-hand corner of the diagram also beliefs in the conflict of student and system needs and in students' natural resistance to learning. But, unlike his colleagues, he feels helpless to deal with the situation.

Students will learn what they want to learn, when they want to learn it. A teacher simply cannot change this fact. Thus, his primary responsibility is to present the information and to do what his job description requires. If a teacher gets a "good class," he is lucky; if he gets a "bad class," there is nothing he can do about it. Those students with initiative will learn. For this teacher, his philosophy justifies his dull, mechanical presentations. At the university level he may prefer to teach "advanced seminars" and shun the basic core courses.

Strategy 4

At the middle of the diagram is the strategy of another teacher who believes in the basic incompatibility of student and a system needs. But he aims for a compromise, or balance, by fully emphasizing neither the student orientation nor the content orientation.

Both system needs and students needs matter, but this teacher cannot see how to put them together. He ends up with a moderate level of concern for each. Thus, the system requires the teacher to give examinations, but he may specify the exact pages in the text from which questions will be drawn. Similarly since he is required to give grades, he may "grade on a curve". Allow students to omit one or more test scores in computing final grades, give extra points for class at tendence, or allow students to write and "extra paper or book review to improve their grades.

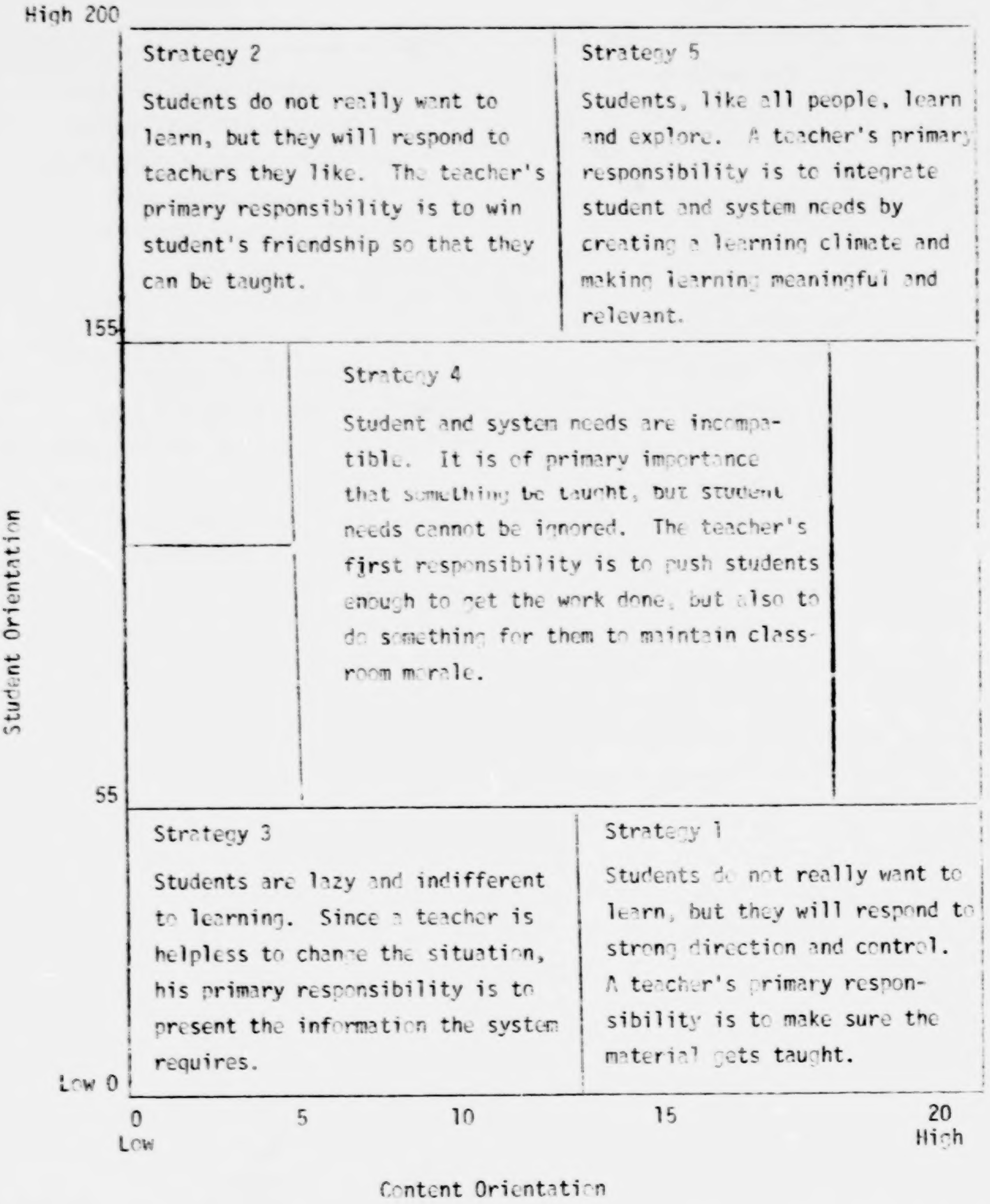
Strategy 5

All the upper right-hand corner of the diagram is the strategy of a teacher who believes that students are always learning. In his mind, student and system needs are not inevitably in conflict. He aims to integrate both sets of needs by placing maximum emphasis on both student and content orientations.

This teacher feels that a teacher's primary responsibility is not to see that something is taught, but rather to see that something is learned. Thus, it is important to create climate in which learning is involving, meaningful, and relevant. Learning activities are structured to bring maximum benefit to the student, the teacher, and the school system.

The preceeding descriptions are clearly caricatures of teacher behavior; they are not intended to be descriptions of real people. Certainly there are as many different classroom strategies as there are teachers. The strategy descriptions exaggerate behaviors that differentiate types of teachers not to simplify behavior, but to make it more understandable. If the strategies are defined, they can be changed. The "S-C Teaching Inventory" is a way of opening this process by providing a vocabulary, a model, and some self-involving experiences to focus on one's own behavior.

Figure 1. Models of Teaching Strategies



Strategy 2

Students do not really want to learn, but they will respond to teachers they like. The teacher's primary responsibility is to win student's friendship so that they can be taught.

Strategy 5

Students, like all people, learn and explore. A teacher's primary responsibility is to integrate student and system needs by creating a learning climate and making learning meaningful and relevant.

Strategy 4

Student and system needs are incompatible. It is of primary importance that something be taught, but student needs cannot be ignored. The teacher's first responsibility is to push students enough to get the work done, but also to do something for them to maintain classroom morale.

Strategy 3

Students are lazy and indifferent to learning. Since a teacher is helpless to change the situation, his primary responsibility is to present the information the system requires.

Strategy 1

Students do not really want to learn, but they will respond to strong direction and control. A teacher's primary responsibility is to make sure the material gets taught.

Part One:

- Teaching and the Problem of Method
- Teaching Behaviours and Styles
- Methods and Techniques (General)
- Methods and Techniques for Teaching Skills

A. Teaching and the Problem of Method

I. What is teaching

To teach is to try to help someone learn something. More formally, it is to help someone acquire or change some behaviour: that is, some skill, attitude, ideal, knowledge, or appreciation.

Teaching is much more than presenting information or even presenting ideas. It includes, among other things, guiding someone to learn by means of the probing, discovering, and analysing and examining activities that are called reflective thinking, the subtle business of building attitudes and values and the more straight forward tasks of skill man-development.

II. The problem of selection

The basic problem in pedagogical method is selection or decision making, even to carry out a simple lesson, one must:

(a) select the instructional goals;

(b) select the strategy by which you hope to reach these goals. In mapping out this strategy, it is necessary to select both:

  (i) the content; and

  (ii) general method or approach

(c) select the specific tactics by which to carry out the strategy;

(d) select the materials and tools of instruction;

(e) select the procedures by which to evaluate the success of your teaching and to follow it up.

It has to be emphasized that proper decision making requires good diagnosis. Without adequate diagnosis teachers/instructors tend to teach everything in the same way to everybody, and as result their teaching becomes boring, frustrating, unsatisfactory and unsuccessful.

Diagnosis in teaching is complicated by several variable factors viz;

(i) the goal one is seeking;

(ii) the individual learner one is teaching;

(iii) the subject matter one is teaching and the discipline concerned

(iv) the tools and technology available teaching;

(v) the nature and dynamics of the group one is teaching;

(vi) one's philosophy of teaching;

(vii) the surrounding environment;

(viii) the teacher/instructor himself/herself - his/her skills, knowledge, attitudes, prejudices, personality, character, and the like.

Let us examine two or three of these variables.

(a) Subject matter

The subject matter to be taught determines to a large extent the strategies and tactics one can use. No one strategy or tactic is good for all subject matter, because what works well for one kind of content may not work well for another subject matter.

No one can hope to cover the entirety of any subject, no matter how competent that person is. Most of the subject matter in a given subject in a programme must be left out. One cannot teach all the Economics or Mathematics there is in an undergraduates programme of three or four years duration. So any person who feels that he must cover the entire subject or everything in the textbook is either incompetent or looking for impossibles. Since it is impossible to teach everything, it is very important to carefully select the subject matter which is likely to be most valuable to the learner. To do anything else is wasteful.

This, however, does not mean that the curriculum should be narrowly vocational and materialisitc. A subject matter that helps learners understand themselves and their environment or makes their lives rich and enjoyable is equally useful and important. The point of emphasis here is that the subject matter should relate to the lives of the learner so that they can see the relationships and utilize them.

(b) Communication and pedagogical method

Communication theory forms an important consideration in the selection of teaching strategies because good teaching requires good communication.

Communication in a teaching-learning situation is difficult because it is so complex. The teacher/instructor/facilitator must communicate with a number of receivers all different from each other. He/she tries to use a combination of a dozen or more media - oral, written, audio-visual, dramatic etc. The messages too are complex - they are not simply facts or skills, or even generalizations, principles attitudes and ideas, but such complicated matters as roles, values and life concepts. All this is further complicated by a group's dynamics.

For effective communication in teaching, one ought to take into account the following steps:

(i) define your objectives clearly;

(ii) study the learners carefully;

(iii) modify the objectives in view of the study of the learners;

(iv) decide on suitable strategies;

(v) set up the motivational machinery;

(vi) organize the plans;

(vii) carry out the tactics.

(c) Instructional objectives

Instructional objectives deserve the serious consideration of all teachers/instructors. Teaching failures i.e., learning may not take place because a teacher/instructor may not select the right strategies and tactics for their instructional goals. Others for lack of clear objectives on the part of the instructor/teacher.

According to Benjamin Bloom instructional objectives are classified into three categories: Cognitive, affective and psychomotor. Below is a hierarchy of educational objectives in the cognitive domain arranged in a hypotherical order from the lowest to the highest mental process. Learners should have experience at all these levels to become able and better thinkers. We should never confine our teaching to the 1.

(1) A Condensed Version of the Cognitive Domain of the Taxonomy of Educational Objectives 1/

(a) Knowledge

1.00 Knowledge
1.10 Knowledge of specifics

1/Benjamin S. Bloom - ed, Taxonomy of Educational Objectives, Handbook I: Cognitive Domain (New York, David McKay Co. Inc. 1956).

1.11 Knowledge of terminology
1.12 Knowledge of specific facts

1.20 Knowledge of ways and means of dealing with specifics
1.21 Knowledge of conventions
1.22 Knowledge of trends and sequences
1.23 Knowledge of classifications and categories
1.24 Knowledge of criteria
1.25 Knowledge of methodology

1.30 Knowledge of the universals and abstractions in the field
1.31 Knowledge of principles and generalizations
1.32 Knowledge of theories and structures

(b) Intellectual Abilities and Skills

2.00 Comprehension
2.10 Translation
2.20 Interpretation
2.30 Extrapolation

3.00 Application

4.00 Analysis
4.10 Analysis of elements
4.20 Analysis of relationships
4.30 Analysis of organizational principles

5.00 Synthesis
5.10 Production of a unique communication
5.20 Production of a plan, or proposed set of operating
5.30 Derivation of a set of abstract relations

6.00 Evaluation
6.10 Judgment in terms of internal evidence
6.20 Judgments in terms of external criteria

(2) The Affective Domain

The objectives of the effective domain may be arranged in the following hierarchy:

1.0 Receiving attention
1.1 Awareness
1.2 Willingness to receive
1.3 Controlled or selected attention

2.0 Responding
2.1 Acquiescence in responding
2.2 Willingness to respond
2.3 Satisfaction in response

3.0 Valuing
3.1 Acceptance of a value
3.2 Preference of a value
3.3 Commitment

4.0 Organization
4.1 Conceptualization of a value
4.2 Organization of a value system

5.0 Characterization of a value or value comples
5.1 Generalized set
5.2 Characterization

(3) Psychomotor Domain

This has not been hierarchically categorized. Psychomotor domain has always been important in teaching the practical and vocational arts. Teachers ought however, to realize that psychomotor aspects are equally important in teaching the humanities and social sciences. Both the affective and psychomotor goals contribute further understanding of education process as they are essential for developing good thinking and for relevant education. Hence instruction should not be limited only to the cognitive objectives. They must encompass the three domains.

(4) Some Principles of Learning

Some of the learning principles on which there is firm agreement are listed below. A teacher/instructor should choose strategies and tactics which are consistent with the general principles of learning.

(i) Learners learn best when they are ready to learn. Readiness is a combination of maturity, motivation, experience, ability, perception, aptitude and other factors. With the use of proper procedures a teacher can make learners ready to learn.

(ii) Learning proceeds more effectively when learners are motivated to learn.

(iii) Individuals learn at different rates and in different styles.

(iv) A person learns how to learn. Therefore, how one learns now tends to determine how one will learn in the future.

(v) A person's perception of the situation determines his conception and behaviour in that situation.

(vi) The whole learner is involved in the learning process. Thus cognitive and skill learning have effective overtones and vice-versa.

(vii) Learning always takes place in relation to some goal. A person learns better if the instructional goals towards which he is consciously working.

(viii) Learning depends on reinforcement. Reinforcement should follow learning immediately.

(ix) To learn, one must do something. Therefore anything one does may result in learning.

(x) Both adults and youngersters react unfavourably to overdirection.

(xi) Information that confirms one's attitudes or opinion is learned more readily than information that refutes them.

(xiii) Skills learned in isolation do not function well.

(xiv) Meaningful material is easily learned and transferred.

(xv) Everything being equal, teaching by means of direct experience is ordinarily more effective than teaching by means of vicarious experience.

(xvi) Cognitive learning can be achieved both by rote association and by discovery technique.

(xvii) Psychomotor learning occurs best when there is explanation, demonstration and meaningful practice.

(xviii) Pleasant experiences are more useful for changing attitudes than unpleasant experiences.

B. Teaching Behaviours and Styles

1. What is teaching behaviour

The main purpose of learning or conversely of teaching, is to bring about a desired change in the behaviour of the learner. Therefore what the teacher does or does not do is of crucial importance to a learning situation. Educators are concerned with how a teacher conducts himself in order to promote learning in all its forms and which learning techniques are most effective in particular learning situations. This brings us to the issue of teaching behaviours or styles on the part of a teacher.

A teaching behaviour or style may be defined as "the way in which a teacher or a leader of a learning activity consistently conducts himself to create a characteristic relationship between himself and his students". The teacher's behaviour is significant factor in shaping the atmosphere in which learners work. Hence learning can be "democratic" or student-centred, or authoritatian, i.e., "teacher-centred" depending on whether learners are involved or not.

Learning however, involves many variables, apart from the teacher;

(a) Student characteristics such as age, sex, socio-economic circumstances, whether the learning is full-time or part-time and, in particular, the degree of his or her motivation.

(b) Teacher characteristics, such as age, sex, level of education, training for teaching a particular group of students, and degree of enthusiasm for the subject and for adult education.

(c) The nature of the learning task, be it the learning of manipulative skills, or ideas.

(d) The objectives of the learning task, such as students being required to pass a public examination, as aginst non-credit liberal education or community development.

The interplay of these and many more factors is any learning situation makes it difficult, as we have already said, to attribute changes in students' cognitive achievements to other, psychological, changes which might occur.

It must be emphasized however, that human behaviour is the result of the interplay between societal norms and regulations on the one hand and the persons own characteristics such as biological constitution on the other. The interplay seems to lead to three types of behaviour:

(a) Normative or nomothetic, which is close to the social norms. This is the behaviour of the law-abiding citizen, who subordinates his personal interests and inclinations to expected patterns of behaviour in his community.

(b) Idiographic, which is the opposite. This describes the behaviour of a person who gives full expression to his personal interest and inclination and considers societal norms and regulations as just a nuisance.

(c) Transactional, which tries to marry personal interests with the desired behaviour in the society. In this case, a person does not disregard social norms and regulations, but pursues his personal interests as far as possible within their limitations. 1/

2. Recommended qualities for the Tutor of Adults

While there is no one "ideal" set of characteristics for a teacher/tutor of adults or even school children, it is possible to say what sort of person is likely to make a successful teacher of adults or children. Recommendations from studies of teaching behaviour and from well considered pieces of advice on how to teach adults are usually related to the characteristics of the adult learner. However, it must be emphasized that a successful teacher of adults should:

(a) understand and take into account the motivational and participation patterns of adult learners;

(b) understand and provide for the needs of adults in learning;

1/ N.B. Henry (ed.) The 59th Yearbook of National Society for the Study of Education, University of Chicago Press, 1960.

(c) be versed in the theory and be experienced in the practice of adult education;

(d) know the community and its needs;

(e) know how to use the various methods and techniques of instruction;

(f) possess communication skills including listening;

(g) know where to locate and how to use educational materials;

(h) have an open mind and provide an atmosphere that allows adults to pursue their needs and interests;

(i) continue his own education; and

(j) be able to appraise and evaluate programmes. 2/

Tutors/teachers should behave in a way which will lead learners to participate in the identification of needs and in the planning of adult learning activities; and to be totally involved in the learning process. A teacher should not dominate the learning process otherwise he becomes boring.

3. Methods and techniques of teaching adults 3/

It is assumed that a trained tutor will aim at arranging the learning acitivity so as to give the learner the fullest opportunity for participation and the best chance to use what he has learned to deal with his environment - for example, for making a gainful living and for maintaining harmonious relations with persons around him. In other words, for the learning experience to be useful in life, it

---

[2/] S.H. Grabowski - Training Teachers of Adults: Models of Innovative Programmes (Syracuse University Publication in Continuing Education, 1976, p. 10.

[3/] Lalage Bown & S.H. Olu Tomosi - opt. cited pp. 108-109.

it should be made as realistic as possible. Making the learning experience as realistic and as useful as possible it requires that the tutor should apply methods, techniques and devices which will encourage the participation of the learner in the learning process.

In discussing educational technique and devices, it is useful to define some of the terms that are often used. E.g., making distinction between *methods*, techniques and devices - the three elements in the adult education process.

(i) *Method* is "the way in which people are organized in order to conduct an educational activity. A method establishes the relationship between the learner and the institution or agency through which the educational task is accomplished". Methods may be individual, such as correspondence study or apprenticeship; group-related, such as classes, discussion-groups and seminars; or community-related, such as mass campaigns.

(ii) Technique is the way in which the tutor helps the learner to establish a relationship between himself and the learning task. Different techniques are effective for different learning tasks. For learners wanting information, such techniques as lectures, debates and written study-guides are appropriate. For learners wanting to acquire a skill, there are such techniques as process-demonstration and role-play. For learners wishing to apply knowledge gained (and it is a theme of this chapter that most adult learning requires this) there are such techniques as group discussion, project-work and field-work.

(iii) *The term device* "is a convenient way of identifying the many instructional aids that extend or increase the effectiveness of methods and techniques, but which cannot themselves instruct.

Items in this category range from instructional materials to communication media and from illustrations to the arrangement of furniture".

In considering both methods and techniques, the teacher and the learner should both look for the one that is most appropriate for the aims of the learning task and also most relevant to the condition of the learner. Thus, if the aim is to teach a manipulative skill such as weaving, the use of a master weaver to teach or coach a learner on a one-to-one basis, giving the learner as much opportunity as possible to practise the skill under the master's supervision, may be the most effective method of promoting learning. To make learning effective with the method of coaching or apprenticeship, various techniques may be employed - for example, a demonstration by a highly skilled weaver or the exhibition of his work.

A group of extra-mural students interested in studying the works of contemporary African writers may meet as a class and use group methods of learning, such as lectures from professors. In this regard, also learning may be made effective by the use of such techniques as drama and discussion.

To sum up, it may be stated that face-to-face learning methods fall into two broad categories: (a) learning methods which are suitable for individual learning situations, and (b) methods appropriate for group learning. Group learning methods may be further classified into those suitable for small groups numbering up to about fifty, and those used for larger audiences and town meetings. What may be called a method for a particular learning relationship will be a technique in another learning situation.

For example, discussion is the suitable learning method for learners wishing to better understand the Bible, but in an extra-mural class, lecturing would be the learning method and discussion would be a technique. Techniques to make learning effective do not belong exclusively to any method or situation but depend on the ingenuity of the teacher and his determination to make learning possible. It is advisable that the guiding principle in the selection of a technique should be the extent to which it will help in making the learning experience as meaningful and as real as possible.

4. Individual learning techniques

Where individuals learn face-to-face (for instance when they want to acquire manipulative skills), it is best to employ the techniques which will give the learner the maximum opportunity for participation; in these cases the objective of the learning activity is to make the learner as perfect as possible in the skill. Indeed, in the learning of some skills, such as driving a motor car or practicing medicine, the learner has to satisfy a licensing authority of the level of his competence before he may practise his skill. Therefore, techniques which will help the learner to achieve a high level of performance should be selected: these include (a) observing the master craftsman at work; (b) discussing with him how to manipulate some tools; (c) demonstrations by masters; and (d) the use of such devices as pictures and films to illustrate the required skills.

The teacher of cognitive subjects may find it necessary to teach only one person at a time because of some characteristic of the learner. The learner may either be physically handicapped and therefore unable to join a group of learners; or, as is usually the case in adult education, the learner may feel shy because he is threatened by the possibility of failure.

Techniques to be employed with individual learners should include counselling (advising) with a view to letting the learner develop regular learning habits and gain confidence in his ability to learn. The learner should also be encouraged to practise his newly acquired skill, be it literacy or accountancy, in real-life situations, such as reading the newspaper or computing his own accounts. The emphasis in selecting appropriate techniques should be to enable the learner to practise as often as possible what he has learned so that his learning efforts are reinforced.

C. General Methods and Techniques

There are a number of methods and techniques which may be considered suitable for teaching adults; and some of them are also good for teaching in formal schools. Generally, the following methods and techniques are good for adult teaching;

1. Inquiry Methods

Teaching by inquiry method involves finding answers to a problem by adults themselves and drawing their own conclusions. It is the opposite of expository teaching in which the teacher tells them what they are supposed to know.

The main objective of inquiry teaching is to ensure that the learner thinks carefully about the ideas, problems, or issues under consideration. Its main advantages are:

(a) to establish deep understanding of concepts, ideas and relationships so that one can develop taste, values and attitudes.

(b) to develop intellectual skills, including the ability to think rationally

(c) it has high motivating power.

The general characteristics of inquiry teaching are:

(i) the teacher attempts to stimulate the learner to think for themselves by asking them thought questions; for interpretation, explanations; for implication of data and information, for contractions, implications and value conflicts;

(ii) the teacher tries to keep the climate persmissive and to encourage the learners try their own thoughts by exchanging ideas, being creative and independent in what they are doing;

(iii) that inquiry teaching involves some variation of problem solving either by individual or group-solving methods; and

(iv) inquiry methods are open-ended allowing the learner to draw correct generalization from the evidence available.

2. The Socratic Method

This is one of the oldest discovery methods in which a tutor/teacher asks questions designed to bring forth from a learner certain concepts or generalizations; or to force a learner to think hard about some belief problem or issue. Some of the main characteristics of this method in modern teaching are:

(i) the discussion consists of a series of leading questions designed to bring out certain answers;

(ii) the ideas are developed by asking the questions in logical fashion;

(iii) motivation is enhanced by the necessaity to answer challenging questions;

(iv) the questions asked develop the idea to be learned as logically as possible. They must be well planned;

(v) the learner develops his/her own idea as a result of the questioning;

(vi) the questioning takes the learner to a predetermined goal or learnings, but sometimes the dialogue is open ended.

The procedures for conducting a Socratic lesson are:

(a) Elicit from the learner a statement of belief or opinion which is belief or statement.

3. Problem solving

This is a kind of discovery learning in which learners attempt to solve real problems. Most problem solving activities are long-term assignment of a few or so many days to complete. In using this method a teacher must:

(i) select the topic;

(ii) frame the problem;

(iii) plan the attack - the information needed and where it can be found;

(iv) prepare a study guide for the learners with questions to be answered and facts to be gathered;

(v) learners should investigate the problem to find out the facts, different points of view etc.

(vi) provide as much information, materials and facts as possible;

(vii) learners should draw the conclusion on the basis of information gathered;

(viii) learners should discuss their findings, and the points of view raised;

(ix) the lesson can end on an open-ended note provided the issues have been objectively discussed.

4. Oral questions and answers

Questioning is one of the oldest and most tried technique. It is one of the many techniques teachers use. In itself, it does not consitutute a strategy. There are tips one can follow to develop his/her expertise in questioning learners:

(i) prepare carefully, making sure that you understand the goals of the lesson; and be sure of the subject content;

(ii) plan your key questions and have them clearly worded and be sure that the questioning technique is what you want to use;

(iii) speak clearly and audibly so that everyone can hear you;

(iv) as the question, wait a little and name the person to answer. Do not name a person to answer the question before asking the question, as many learners tend to ignore such a question as it is not for them to answer. When the person named fails to answer the question, most learners will want the question repeated as they did not pay attention when the question was first asked;

(v) be natural and informal when using oral questioning. Direct questions to the whole class and not to one section of the group.

(vi) ask only a few key questions, and also ensure that there are a series of questions that build up from one question to another;

(vii) when answers are given, ensures that complete responses are given and not "yes" or "no" type of answers;

(viii) use a variety of questions; convergent, divergent, evaluate, fact or memory type questions, or questions that go beyond classroom reading;

(ix) ask questions that will encourage learners to participate. Avoid cross examining, baiting, or embarrassing learners with questions. On the other hand, make sure that wrong answers are corrected by other learners or yourself;

(x) to ensure that there is an open atmosphere, insist on courtesy from everyone in the group;

(xi) teacher should encourage learners to ask their own questions, and they do so, treat them courteously. Use the learners' questions as lead-ins, and let others try to answer them before you do;

(xii) counsel learners who want to use their questions to attract attention or simply to test the teacher because they already know the answer. In this latter case ask them to answer the question first.

5. Oral-text reciation

The open-text method is a technique in which the learners are allowed to refer to their books and notes during class discussions. In this way, learners can back-up their assignments with information and facts:

(a) it frees learners from note memorization and reciation on facts;

(b) helps learners to realize that facts are only a means to an end;

(c) it brings out important facts by using them;

(d) learners learn the importance of checking and documenting;

(e) it uses time efficiently.

6. Lecture method

Although the lecture method is used for many purposes, it is greatly overused, and is not very effective for most instructional purposes. The Lecture Method has a number of disadvantages viz:

(i) learners get less and retain less from lectures. According to some research studies, people generally remember:

10 per cent of what the READ
20 per cent of what the HEAR
30 per cent of what they SEE
50 per cent of what they HEAR AND SEE
70 per cent of what they SAY
90 per cent of what they SAY as they DO a thing [1]

(ii) lectures can be a waste of time. Better give a handout and use the time for discussion;

---

[1] Marvin D. Alcom, James S. Kinder & Jim Schunerl - Better Teaching in Secondary Schools (New York, Holt Rinchart & Winston Inc. 1970) p. 216.

(iii) lectures are seldom useful for changing attitudes or attaining the higher cognitive goals;

(iv) lectures, when boring lead to classroom indiscipline;

(v) there is little room for exploring or interaction amongst learners.

The Lecture Method can be very useful for a number or purposes:

(a) to establish a general point of view or a state of mind rather than to teach specific facts, concepts or ideas;

(b) for giving out information very quickly;

(c) to introduce new units and assignments especially long term assignments;

(d) for informal talks or lectures to motivate learners and arouse their interests;

(e) for use in large groups or in team teaching.

In order to arouse the maintain interest in lectures a teacher/ tutor must:

(i) open the lecture with a challenging question, problem or fact;

(ii) tell them what he intends to do;

(iii) puzzle them a little;

(iv) relate the content to things they know or like;

(v) use questions both real and rhetorical;

(vi) use plenty of examples; demonstrations etc.

(vii) keep up the pace of the lecture;

(viii) make use of dramatic effects. Pause, ask questions, change tempo, avoid monotony and where necessary spice it with a joke.

(x) utilize humour.

7. Repetition, practice, drill and review

(a) Repetition

This is important in skill and concept development as it gives the learner a chance to renew and vary experiences. It gives opportunities to reinforce and refine skills and to amplify concepts.

Repetition can be very useful to polish and refine something already learned; to fix something in memory such as formulae; to increase an understanding of a concept of idea; to make something a habit; or to consolidate what has already been learned.

(b) Drill and Practice

In conducting drill and practice, a teacher must give clear instructions to learners so as to reduce the chance of learning incorrect procedures and forms. Instructions can be oral or by way of demonstration before learners embark on an assignment.

Always ensure that learners have the proper tools, materials and right information. The practice must be as lifelike as possible and be meaningful. Practice should be individualized and structured, and should form part of regular work. Ensure that a variety of materials are used in the leraners' activities.

8. Discussion techniques

True discussion is one of the most effective, yet the most difficult of all teaching techniques.

Use the discussion technique to solve problems; develop and change attitudes; to present and make learners aware of countrary views; develop leadership skills, develop self-confidence, and to encourage constructive and logical thinking.

In conducting the discussion, make sure that you are prepared for the discussion. Make an opening statement to point out the purpose of the discussion and then outline the rules for such a discussion; adjusting them as the group sees fit or as necessary without changing your intended goal. To start the discussion, open with a specific case or problem, and then conduct a series of challenging open-ended questions. Create an environment conducive to face-to-face expression, and making sure that the discussion is informal, and everyone in the group is encouraged to contribute. Try to control those who want to dominate the discussion.

9. Panels, forums, symposia, round tables and debates

Formal discussions range from the quite informal round table to the extremely formal debate. They all have in common the factor of being audience activities and are therefore useful in large classes where small group discussions would not be effective.

Panels, symposia and forums can be useful in the following situation:

(i) as culminating activities

(ii) to present points of view concerning controversial issues;

(iii) to present reports of the learners committees;

(iv) to present findings of the learners' research

(v) as a means of involving learners and utilizing their various talents;

(vi) to give variety and change of pace to the class.

In such formal discussions, give the learners a chance to ask questions; take notes of the points being discussed and summarize main points of the discussion. Let them evaluate the arguments and the logic of panel members but not their manner or skill of presentation.

10. Case-study method

This consists of a fairly intense study of one individual, situation, insitution decision or issue as a basis for making generalizations on a given subject or issue. It is very useful because it gives a chance to infer from a concentrated and deep study rather from a cursory study of a number of cases.

A case study may concern a contemporary or historical problem to be investigated. To ensure that it is done properly provide materials to the learners or tell them where they can get such material or information. Discuss the material and draw conclusions from it.

11. Role-playing

This can be defined as an attempt to make the situation clear or to solve a problem by unrehearsed dramatization. Role-playing activities are useful for:

(a) motivating or launching units;

(b) making clear contemporary on historical situations in which there may be conflicting views, biases and different opinions;

(c) teaching attitudes, values and for developing more vivid concepts;

(d) teaching content having to do with human relationships;

(e) developing citizenship skills by showing both the successful and unsuccessful methods of solving interpersonal problems; and providing practice in taking real life roles.

In using this method, ensure that players have been properly selected, and have been properly prepared for their roles. This should be done after a significant issue for role playing has been selected. Ensure also that the audience has been prepared for role-playing, by briefing them on how they are to behave during the presentation. Let there be no exaggeration on the part of players about their roles; the players and audience should act naturally.

12. Simulation exercises

Simulation combines role playing and problem solving. It consists of the learner performing in a simulated or contrived situation which duplicates a real situation as closely as is feasible so that the learners will (i) understand the real situation and/or (ii) learn how to perform in the rural situation.

What is required in a simulation exercise is to assign roles to the learners in a fairly well defined situation. Confront learners with simulated real life situations that make it necessary to take action. Learners must stay within the limits prescrived by the realities of the situation. The teacher/tutor must act as a refere or umpire and score keeper, or let one of the learners play this role. A mock examination given to learners is one example of a simulation exercise of real life situation.

Learners should be free to discuss the situation, make generalizations and draw conclusions from the exercise. In the case of a mock examination, discuss the results with the learners; what they make out of them, and how they should have approached the questions.

D. Methods and Techniques for Teaching Skills

The principles for teaching all skills - motor skills and others are much the same:

1. A learner must first learn the procedures involved in the skill either through instruction or by trial and error;
2. A learner must practice until he/she becomes skillful;
3. He/she must continue to use the skill in order to maintain it.

I. Teaching Understanding: How Concepts are learned

Although they are abstractions, concepts seldom exist in abstract. Rather each concept exists in the mind of someone where it is that person's understanding of something, that is to say, the sum total of all the ideas or notions a person has about a particular topic. Thus, a person's conception or understanding of green is the totality of one's ideas about "green" or "blue" etc. That concept may be imperfect or incorrect, but it is his alone.

Concepts can be developed by combining or separating common features a class or which are not common to a class, until one arrives at what he considers to be the case. In short, one takes the following steps in concept development:

(a) Locating the common property of feature;

(b) isolating the common property of features by:

- (i) varying the concomitants;

Best copy available

(ii) contrast.

(c) Labeling or sorting the categories.

II. Suggestions for teaching Concepts

The following are suggested for teaching concepts.

(i) provide for a variety of experiences through doing or through a variety of approaches to a problem;

(ii) avoid overdependence on verbal activities since concepts are not learned by words alone. Try to use all sorts of learning activities - role-playing audio-visual aids/materials, construction activities discussions etc. - to ensure a build-up of the desired concept;

(iii) Explain the official meaning of the concept clearly and then allow learners to explain their understanding of the concept being developed;

(iv) use clarifying operations, for instance, ask a learner to define in his own words the term at issue; or let him demonstrate his meaning, or explain in logical terms what he means by a given concept;

(v) use discovery techniques through questions, inferences from pertinent data, or examples;

(vi) provide opportunities for learners to form concepts and generalizations by means of both inductive and deductive interferences. For instance by deduction:

(a) give the learners a definition of generalization as a proposition.

(b) give the learner a lost of specific cases, some of which exemplify the generalization and others do not;

(c) let the learners test the specific cases to see whether they fit the definition or not.

(vii) point out the essential elements which are pointers to the understanding of the concept;

(viii) use advance organizers i.e., a summary of say 500 words or an overview what is to be learnt. Provide the principles on which to hang the facts and concepts to be learned. An advance organizer should:

(a) give an overview of what is to be learned;

(b) relate past learning with the new subject matter to be learned;

(c) provide organizing elements;

(d) be more abstract and general than the subject to be learned.

(xi) foster divergent original thinking;

(x) cultivate critical attitudes toward one's own concepts;

(xi) encourage learners to test their generalizations;

(xii) emphasize generalizing rather than the generalization.

III. General Discovery Strategy for Teaching Generalizations

A discovery strategy for teaching a generalization or concept is to:

(i) select the generalization or generalizations;

(ii) pick sub-generalizations, if necessary;

(iii) diagnose the learners' present understanding and need;

(iv) set up a problem situation;

(v) set up experiences that will bring out the essential elements during the problem solving;

(vi) set up experiences that will bring out contrasting experiences;

(vii) draw generalization or concept;

(viii) apply the generalization or concept.

IV. Teaching attitudes, interests and values

It is harder to teach attitudes ideals, interests, values and ethical moral character than concepts and skills. Yet teachers bear some of the responsibility of teaching these.

(a) Development of Attitudes

Attitudes can be developed in a number of ways by:

(i) invite other people consciously or unconsciously by association with other people;

(ii) identifying with a model and attempting to copy the behaviour of that model. It is harder for adults to model themselves on others; where as youths tend to model themselves after older people they admire.

(iii) We develop attitudes from emotional experiences. Good emotional experiences result in favourable attitudes and unhappy ones in unfavourable attitudes;

(iv) attitudes can be developed as a result of information one receives e.g., on race relations, or attitude towards sports;

(v) through deliberate cultivation one usually sets out an ideal and tries to follow it until it becomes habitual.

(b) Development of ideals

Ideals are purposeful goals towards which we strive. Repetition and reinforcement tend to make them automatic and thus change them into attitudes.

For a person to adopt goals as ideals several conditions must be satisfied:

(i) the learner must understand what the good is;

(ii) the goal must be presented in such a way that the learner sees it as desirable. It is therefore of little value to give direct instruction; better appeal to personal concern and give models that can be followed;

(iii) the learner's awareness of the desirability of the goal must be reinforced time and time again.

(c) Development of values

If one wants to develop values in a learner it would be well to:

(i) encourage the learners to make choices and to make them freely;

(ii) help them discover and examine available alternatives when faced with choices;

(iii) help them weigh alternatives thoroughly reflecting on the consequences of each;

(iv) encourage them to consider what it is that they prize and cherish;

(v) give them opportunities to make public affirmations of their choices;

(vi) encourage them to act, behave, live in accordance with their choices;

(vii) help them to examine repeated behaviours or patterns in their life;[1]

V. Sample Tactics and Strategies for Teaching Attitudes and Ideals to Adults

It is never too late to learn. After all, education is a life-long process. So there is always room to change and develop attitudes and ideals. Therefore some of the strategies and tactics that can be used to teach attitudes are as follows:

(i) use informal activities in which there is plenty of give and take and casual incidental remarks and questions. Lectures and recitations are no good for teaching attitudes;

(ii) let the learners meet the phenomena to which the attitude relates time and time again in circumstances favourable to the attitudes;

(iii) avoid preaching and dectating;

(iv) provide models by means of literature, history, current events etc. Models must be realistic, consistent and one that the learner would like to follow;

(v) the teachers' own example could be a model to follow;

(vi) let learners find facts for themselves. Encourage them to check for facts as opposed to opinion;

(vii) use group procedures such as role playing and discussion groups to mould attitudes;

(viii) use inductive methods, problem solving, case studies and other approaches in which learners find their own answers;

(ix) use open-ended questions;

---

[1] Louis Raths, Merrill Harmin & Sydney Simon - Values and Teaching: Workshop with values in a classroom (Columbus Ohio, Charles E. Merrill Publishers 1966).

(x) play the devil's advocate. Present the arguments for the other side and let the learners argue you down if they can;

(xi) contrive incidents for learners to discuss and draw conclusions from.

VI. Teaching How to Think

Critical or reflective thinking can be defined as the process of rearranging or reorganizing information and knowledge to make new knowledge. Reflective thinking may be convergent, divergent or evaluative. Convergent thinking involves finding predictable answers e.g., mathematical solutions. Divergent thinking involves a free-ranging search for answers and is therefore nor predictable. Evaluate thinking puts a value on things. Each of these has a place in a classroom. We would not emphasize on convergent thinking.

In critical or reflective thinking, a person goes through the following processes.

(a) A person becomes aware of a problem; he/she then isolates it, and decides to do something about it;

(b) The person looks for clues or a solution of the problem. In so doing he/she thinks up of possible solutions (hypotheses) or approaches to take in solving the problem, and then he tests the tentative solution or approaches against criteria that will help him/her evaluate them adequately;

(c) The person rejects the tentative solutions or approaches which do not meet the requirements until a suitable one is found. When all hypotheses have been tested, a conclusion is reached when one solution appears adequate answer to the problem under review.

Thinking is something we learn to do; it is not spontaneously generated. Our thinking styles to-day are the culmination of skills, attitudes and ideals we have acquired over the years. Although it is claimed that no one can teach another person to think well, it is possible to help adults develop the skills and attitudes necessary for efficient, effective thinking. Among the skills needed for successful reflective thinking are:

(i) finding, recognizing and defining problems;

(ii) finding evidence;

(iii) observing accurately;

(iv) interpreting and reporting correctly;

(v) judging evidence;

(vi) detecting faulty arguments, bias, poor logic, and other evidences of faulty reasoning;

(vii) analysing and evaluating data and alternatives;

(viii) detecting relationships, seeing parts in relationship to the whole, tying elements together, recognizing similarities and differences;

(ix) choosing between alternatives;

(x) making inferences and drawing conclusions;

xi) analysing.

It should be emphasized that attitudes and ideals needed for good thinking include: 1/

(a) ideal of suspended judgement;

(b) ideal of getting all the facts

1/ Based on Leonard Clark's list of Jersey City State College on General Methods of Teaching, 1973.

(c) objectivity

(d) honesty

(e) open mindedness

(f) critical mindedness

(g) curiosity

(h) himility

(i) thoroughness

(j) self-respect

Thinking is largely a skill. Therefore, learning to think is largely a matter of practice. Adults must practice all types of thinking skills because "one learns to thinking by thinking".

VII. How to Check Adults' Thinking [1/]

To check the efficiency of adults' thinking, one may consider the following things:

(a) Is the person/adult interested in finding things out?

(b) Does he/she stick with problems or does he/she give up?

(c) How rational is the person? Is he the type of person who thinks things through to logical conclusion or does he jump to conclusion?

(d) Does he have the patience to test ideas?

(e) Is he logical in his thinking?

(f) Is he original and creative in his thinking?

(g) How well can he recognize and define problems?

(h) Can the person hypothesize and select pertinent evidence?

(i) Can the person distinguish fuel from opion, detect bias in a given problem and judge worth of courses and evidence?

(j) Can he draw valid conclusions and test them?

These are some of the questions a teacher ought to ask to try and help learners develop their thinking. Answers to these questions about a learner will greatly help facilitate the teacher's handling of reflective thinking activities of the learners.

VIII. Useful Teaching Strategies on How to Think

In teaching adults to think the following strategies may prove useful:

(a) Inquiry; (b) Discovery; (c) Problem solving; (d) Socratic Method; (e) Critical reading; (f) Debate; (g) Interviews; (h) Simulation-mock sessions; (i) Dramatization; (j) Research assignments; and (k) Discussions.

These strategies are not mutually exclusive as it is possible to combine one or two in an activity.

IX. Specific Teaching Strategies which Enhance Learning to Think by Adults

The following strategies are suggested for teachers to help adults learn to think better:

(a) Emphasize understanding processes and reasons for correctness rather than correctness itself. Thniking is a process not an event or thing;

(b) Encourage adults to gather information as a means by which to think rather than an end in itself. Information alone will not aid one's thinking; it is what one does with the information that counts;

(c) Utilize real problems that concern adults: especially personal problems;

(d) Encourage adults to evaluate or make comments on proposals put forward by a teacher or other learners;

(e) Let adults check their reading for accuracy, logical thinking or bias:

(f) Create problems to be solved, or adapt their own problems and point out contradictions;

(g) Use lectures, textbooks, or visual aids as spring boards to raise probing qeustions and avoid presenting learners with predigested answers.

(h) Let adults do things for themselves. Autonomy is a prerequisite for effective thinking. The teacher of adults is a facilitator and so he should let the learners free to think and act as they see fit. If mistakes are made ask them to find out what went wrong. Challenge them where their thinking is ill considered,

(i) Let them make as many decisions as possible in what they are doing or learning to do. But help them to develop criteria for making decisions. Where possible let them live with their mistakes. After all, to err is human.

(j) Allow divergent views and disagreements. Keep set solutions to a minimum, and do not insist on a single answer to a problem, unless it is in mathematics.

(k) Use problem solving, and let them enter into the problem solving process.

(l) Provide room for criticism and evaluation, but ensure that such criticism can be logically justified.

(m) Encourage hypothesizing and imagining, and see how they can provide an answer to a problem.

(n) Let adult learners have a chance to classify and categorize their evidence by type, and encourage the attitude of proving whatever they do or say.

X. Creative Thinking in Adults

Creative thinking is very much like critical and reflective thinking and problem solving. The following are possible steps in creative thinking:

(a) Preparation: The period in which one becomes familiar with the topic gains necessary background experience, and gets motivated and starts to work.

(b) Incubation: The period during which the idea lies follow, and the creator relates and mulls over it.

(c) Insight: The period during which the creator has his inspirations and produces his work; and

(d) Revision: The period during which the creator refines his creation.[1]

XI. How to Stimulate Creative Thinking in Adults

1. Respect their ideas and show that you think their ideas are valuable. Always encourage their ideas even if they are crude at first.
2. Encourage spontaneous expressions, discussions and experimentation.

---

[1] William Burton, R.B. Kimball and B.L. Wing - Education for Effective Thinking, New York, Appleton - Century - Crofts, 1960.

3. Avoid discouraging adult learners, and using negative comments. Too high a standard can discourage adult learners easily.

4. Take your time with adults. You need not rush them over a subject under consideration. Let them relax and ponder over the issues.

5. Do not sacrifice creativity on the altar of discipline, because once one has started, orderliness and system help to foster creativity.

XII. Teaching Controversial Issues

Any topic about which people hold strong, differing opinions can be considered controversial. People may hold very strong and emotional views about an issue about which a teacher may have to teach it. Controversial issues should be open-ended and a teacher should avoid pat, dogmatic answers.

Controversial issues are important in the real life a community, they constitute a vital element in the life of a community. As such they should not be left out in our courses - religion, politics and polygamy can be very controversial among certain communities.

XIII. A Teacher's Respondibilities in Teaching Controversial Issues to Adults

In teaching controversial issues, a teacher should have extensive knowledge of the topic, teaching skill, tact and sensitivity; courage tempered with caution, discretion and above all, common sense and wit. His responsibility will therefore be to ensure that:

1. The topic is suitable for adults and for the course;

2. All necessary clearances are obtained, particularly if there seems to be any possibility of the issues causing embarrassment, anger irritation to some members of the group or community.

3. That the group of adults are ready to discuss the controversial issue; that both the learners and the teacher have the necessary background.

4. All essential points of view are fairly considered, and that errors in fact or reasoning are pointed out.

5. Adults should be allowed to formulate their own opinions and conclusions without endue influence or imposition to views by a teacher or other adults.

6. Many adults have deep feelings on certain issues. So do not attempt to overturn these deep-seated beliefs as this can lead to very heated debate and more entrenchment of earlier beliefs. Take your time to convince someone with opposite views through logical and convincing arguments.

7. Stimulate and guide in their study or controversial issues, but do not overpersuade them to change their views. After all, belie and views held by the teacher may turn out to be wrong. Tell them your opinion, but let them be free to think rationally.

XVI. Strategies for Teaching Controversial Issues to Adults

The following strategies and tactics are suggested for the teachers of adults:

(i) use indirect approach to study or discuss a hot or controversial issue, e.g., instead of discussing about dictorship in your country, talk about how democracy operates in USA or Britain; instead of talking about civil service corruption in your town talk about corruption in Africa in general;

(ii) use problem solving approaches, featuring open-ended problems and research type investigation;

(iii) let adults discover and evaluate their own values through value clarifying responses, and value discussions;

(iv) utilize direct approach techniques such as deabate, panel discussions, dramatics, role playing; simulation research techniques etc.;

(v) establish rules for the discussion of controversial topics e.g., no names to be mentioned, no specific country etc.;

(vi) separate fact from opinion and keep a list on the board of what is fact and what is opinion;

(vii) to ensure that all facts of topics are considered, present some aspects of the topic yourself. Let them see all sides of the coin;

(viii) let adults prove or disprove statements or facts objectively by analysing available information and drawing their own conclusions;

(ix) avoid emotionality and attachment towards e.g., socialism, imperialism etc., with clear understanding of the words.

Part Two:

- Training Methodologies - Concepts and Application

A. Training Methodologies: Concepts and Applications[1]

Introduction

One of the difficulties of some trainers is that of selecting and using appropriate training or instructional methodology that will produce effective teaching learning experience. This difficulty result first from the ambiguous usage of instructional methods by most professional trainers and authors on training.[2]

Table I: The techniques which can make contributions towards the learning objectives[3]

Objectives Techniques	Psychomotor Skills	Knowledge	Attitudes & Values	Interpersonal Skills	Managerial Supervisory Skills	Organizational Development	
Assignments	x	x	x	x	x	x	
Brainstorming			x	x	x	x	
Buzzgroups	x		x	x	x	x	
Case Method	x	x		x	x	x	
Circulars (with materials)		x					
Clinic	x	x			x	x	
Colloquy		x					
Conference	x	x	x		x	x	
Critical Incident			x	x	x	x	
Demonstration	x	x			x		
Discussion	x	x	x	x	x	x	

---

[1] J.B. Ajila and K. Bademosi - ABC Management Group Ltd. Lagos, 1980.

[2] See Dugan H. Laird et al. American Society for Training and Development: Training Methods for Skills.

[3] A cross (X) indicates which technique contributes to learning objectives.

Table i Cont'd.

Display & Exhibits (with materials)	x	x				
Field Trips	x	x				
Films (with materials	x	x	x	x	x	x
Forum		x	x	x	x	x
Games	x		x	x	x	x
Handouts (with materials)		x				
Human Relations Laboratoties			x	x	x	x
In-Baskets			x		x	
Incidents Process			x	x	x	
Job Instruction Training	x	x				
Learner Controlled Instruction	x	x	x	x	x	x
Lecture		x	x			
Modelling					x	x
Models (with materials)	x	x				
Newsletters (with materials		x				
Open Classroom	x	x	x	x	x	x
Panel		x				
Programmed Instruction	x	x				
Question and Answer Sessions		x	x	x		
Relating Reading		x	x	x	x	x
Role Playing	x	x	x	x	x	x
Seminar		x				
Sensitivity Training			x	x	x	x
Simulations	x		x	x	x	x
Symposium		x				
Syndicates	x		x	x	x	x
Tours	x	x				
Videotapes (with materials	x	x	x	x	x	x
Workshops	x	x			x	x

From this list for example, it is absolutely misleading to equate the workshop with the lecture as both techniques when in Workshop situation, series of lectures and other techniques listed, such as, Role Play, In-Basket, Case Study and so on can be carried out. It is more misleading to think of the Conference as technique just as Films (with materials or handouts).

Another reason why some trainers find difficulty in selecting and using training methods appropriately is the common disregard for the differences among learners of different categories. The industrial trainers interact with adults and consequently they should not be carried away by traditional methods used during their school days.

In order to remove further ambiguity in the selection and use of traing methods, this paper is put together to:

- examine and clarify the various teaching/learning methods with a view to categorise them according to their contemporary usage;
- differentiate the adult learner from the child learner in order to evolve some basic assumptions about adult learners and indicate their implications for choice of training strategies methods and techniques;
- present a tabulated summary of training strategies, methods and techniques in terms of their involvements and limitations.

Training Methodology - Clarification and Re-Classification

From the list in Table 1, it is clear that each of the terms has distinct meaning and therefore must be used appropriately. During a conference for example a number of teaching/learning methods such as the Lecture, the Discussion, the Panel, Question/Answer sessions can be carried out. Similarly a number of teaching/learning methods, techniques, materials are applied during a workshop or seminar or symposium

To remove some ambiguous usage of these terms and concepts, we have come up with three classifications of these various teaching/learning terms. We suggest that those terms that can embrace the application of other methods be classified as strategy and those terms that can be combined during the application of a given method should be called techniques. In other words there should now be:

1. Training Strategy
2. Training Methods
3. Training Techniques

Definition of Terms

1. Training Strategy

This is borrowed from the military usage to mean favourable operational plan for attack. Here we use it to mean:

> ' a favourable mode of action used to maximize the results of a planned training programme' e.g., conference, workshop, seminars etc.

During any of these strategies, a number of methods can operate.

2. Training Method

In general a method is a way of doing something with conscious regularity and orderliness. For our purpose we use it to mean:

> ' a definite system of teaching/learning procedure which helps to make a give subject matter meaningful to the learner' e.g., the lecturer, role-playing, case study, in-tray, project, and etc.

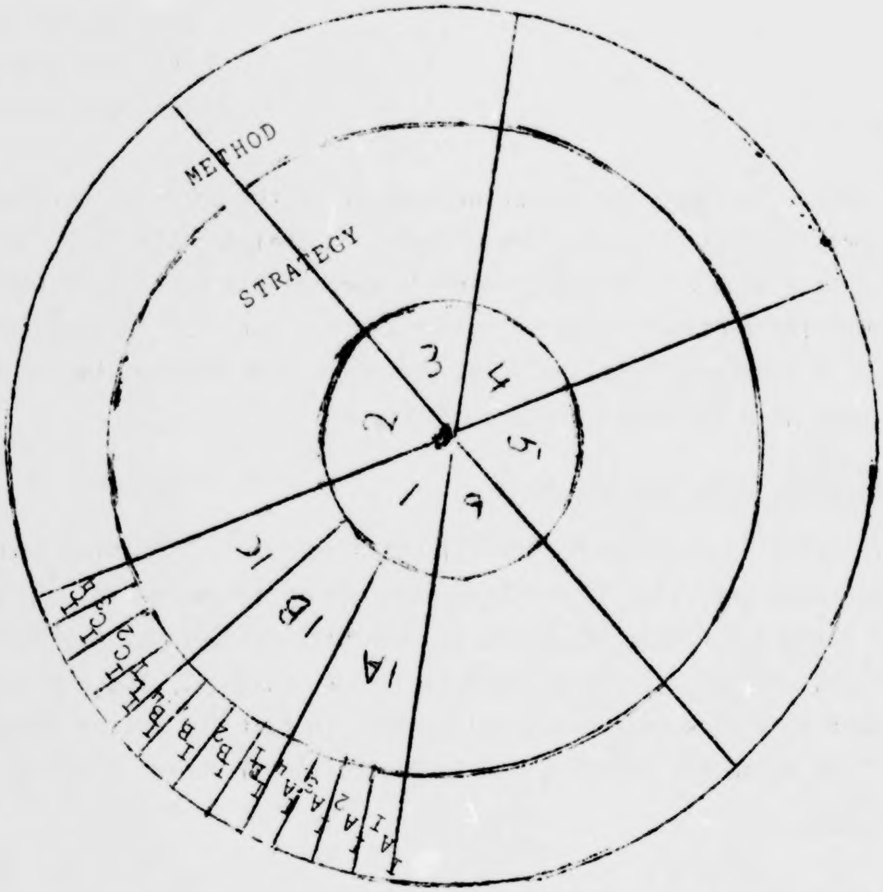
While applying any of the methods, a trainer is capable of using a number of techniques.

3. Training Techniques

For the purpose of teaching/learning process, Training Technique can be defined as:

> 'that highly personalized activities by which learners are stimulated or directed towards stated objectives' e.g., talk demonstration, questioning, counselling etc.

From the above classifications and their definitions, it is now possible to differentiate for example a Conference from a Talk. It is also clear that within a given method a number of techniques can be applied while within a given strategy, it is possible to employ more than one teaching/learning methods. The following diagramme illustrates vividly the inter-involvement of Training Strategy, methods and techniques.


METHOD
STRATEGY
1
2
3
4
5
6
1A
1B
1C
1A1
1A2
1A3
1A4
1B1
1B2
1B3
1C1
1C2
1C3

Key to Diagramme

Strategies	Methods	Techniques
1. Workshop	IA Programme Instruction	IAI Writing
		IAI Memory Aids
		IA3 Demonstration
		IA4 Reading
	IB Role Play	1B1 Observation
		IB2 Questioning
		1B3 Demonstration
		1B4 Talking or Verbal Dialogue
	ICI Lecture	ICI Drill
		IC2 Questioning
		IC3 Demonstration
		IC4 Observation

In the above diagramme the inter-involvement of the three classifications are clearly indicated. Using the workshop as training strategy one discovers that a number of training methods such as the Lecture, Roleplaying programmed Instruction and so on can be carried out. In the same manner a number of technique like the Talk, Demonstration, Questioning, Drill can be used when using the lecture method.

Training Aids, Materials and Media

As there exist ambiquities in the selection and use of training methods, so also confusions exist in training aids materials and media. In the list in Table I for example, handouts, exhibits, videotapes (with materials Newsletters, Models etc., are classified as techniques. These are no techniques that aids, materials and media. In fact for better understanding things like these are better known as Instructional Media. This is defined as:

> Those agents applied to an instructional process in order to facilitate effective teaching and learning.

This definition is suggested to remove the ambiquities in using visual aids for any form of media. The use of visual aid is not comprehensive since all teaching/learning aids are not necessarily visual. Some are audio and some are digital.

1. Instructional Equipment
2. Instructional Materials.

The equipment constitute the hardware used in training such as:

- Projectors
- Taperecorders
- Players
- Videotape Recorder (VTR)
- Television
- Radio
- Epidiascope
- Transparency making machine etc.

Instructional materials are subdivided into four,

1. Non-projected materials and devices such as chalkboard, flip chart, magnetic board, flannel board, pictures, diagrams etc.
2. Projected materials or software like tapes - reel-toreel, cassette, catridge, videotape, films, filmstrips, slides, transparencies, records, etc.
3. Models
4. Real objects

Fundamental Issues about Adult Learners

Most trainers today still apply the methods used by teachers in Primary schools to train adults in Industry. The fact is that the assumptions which underly elementary education for children do not fit those about adult learners. For this reason, most training efforts are often ineffective.

Learning for a child is extremely motivated. The child is pushed into a learning situation by the parents in which they live. Therefore to the child learning is primarily a prescriptive educational process which is solution centred and constatly directed to most prescrived values.

For the Adult in Industry the situation is very different. The adult in an employment situation has the intrinsic motive for self-career development we hope. Though he may at times be externally motivated by his Boss and perhaps, the opportunity for promotion and advancement, he has the choice to opt of the learning situation. This is unlike the child learner. Therefore to the adult, learning is more a process or re-training which is designed to solve specific performance needs and consequently, such learning process should be by consultation and reflection on self and occupational or professional needs.

Major Concerns

From the above analysis there are two major concerns which the trainer should not:

1. Knowing his adult learners - their feelings and attitudes towards themselves;
2. helping his adult learners to learn by creating the appropriate learning environment, strategies, methods and techniques as a result of proper understanding of some learning generalizations and assumptions.

Feelings of the Adult Learner

These relates to the attitudes he has towards himself - his own psychological feelings and problems, the understanding of which will help the trainer of adults to be effective learning facilitator.

1. Feeling of Anxiety and Fear - which is caused principally by the psychological principle of "Self Theory".

   This relates to potential conflict of values involved in going back to learn.

   The Theory is that every adult already has certain well-developed ideas about himself along with his own system of ideas and beliefs. To admit that he has a need to learn something new, is to admit that there is something wrong with his existing values.

   The Hint here is that teachers of adults should carefully plan teaching-learning situations to help adults preserve at least some of their "self image".

2. Feeling of Ageing - which adults feel affects their intellectual capabilities.

3. Feeling Arising from their Different Social Background e.g., the lack of rich family to get adquate childhood education etc.

4. Feelings Arising from School Memories
   - of poor performance
   - of poor teachers, poor facilities etc.

The awareness of these four important set of feelings will help the trainer in his responsibilities towards the adult learner.

Some Generalizations Involved in Teaching/Learning Process[1/]

Trainers should be aware of the following Teaching generalization:

[1/] See Gordon L, Lippit, "Concepts of Learning and the Development Process", Training and Development Journal May, 1969.

1. All human beings learn irrespective of age

   The old adage that you can't teach an old dog new tricks is wrong. The problem is that it is just more difficult because the elderly have learned some wrong attitudes and skills.

2. Learning is an Active Process

   People learn best when they are actively involved and interact with one another and with the teacher.

3. Learning is Individualistic

   Each person learns in relation to his own personality, perception, expectation and readiness.

4. Learning takes place at various levels

   Of knowledge, skills and attitude. The first two are much easier than attitudinal change.

   These generalizations are realistic and their awareness will help us to design learning experiences for adults and evaluate the effect of our efforts.

Some Assumptions about Adult Learners and Their Implications for Training Methodology[1]

To further deepen the trainer's understanding of the adult learner, he should carefully consider the following learning assumptions that seem important for the adult. Below each assumption is the general implication for the selection of a training strategy, method and techniques.

1. That adults enter learning situation with an image of themselves as self-directing, responsible, grown-ups, not as immature dependent learners. Therefore they will resist situations in which they are not treated with respect.

---

[1] Malcolm Knowles, Training and Development Journal, June 1969.

Implication: Let adult help to plan and conduct their own learning experience they will learn more, than if they are passives recipients.

2. Adults enter learning situation with more experience than youths. Therefore they have more to give to the learning situation in terms of experience.

   Implication: Use those methods which build on and make use of the experience of the learners. These will produce the greatest learning.

3. Adults enter a learning situation with more intention to apply learning to life problems that do those who are younger. Therefore they require practical results from learning.

   Implications: Use strategies that will focus learning experiences on life problems as perceived by the adults since learning will be more relevant than when organized around prescribed subject topics.

Conditions Required for Effective Learning

With the above generalizations and assumptions, we ean now focus on specific conditions required for effective learning in adults.

1. Sufficient Motivation: (a) Self; (b) From Job/Social Environment; (c) The Facilities for Learning.
2. Clearly defined and mutually acceptable need for learning.
3. Appropriate materials for learning.
4. Opportunity to ipractice acquired learning
5. Friendliness from trainer particularly by taking time for individual counselling and avoiding criticisms.

6. Secure satisfaction from learning by providing some sense of achievement, confidence and satisfaction in the adult learner.

7. Learning should be varied to prevent boring through repetition.

8. With learner identify or set standards of performance.

9. Let the learner have a means of assessing his own self behaviour.

10. Learning through interactive processes is usually more valuable.

11. Let learning relate to change in self or in job situation since learning is basically a process of change.

Conclusion

The above is presented to stimulate further thinking on training methodologies and assumptions. Suggestion will therefore be appreciated. The major concern however should be that the trainer is responsible most of the time for effective learning. It is a general assumption that there are no bad classes, only bad teachers.

GUIDE TO SOME IMPORTANT TRAINING STRATEGIES? METHODS AND TECHNIQUES

A Strategy	Meaning	Comments
SI Conference	A meeting of several people (often high level) designed to share experience on a common topic or problem with the specific aim of evolving a course of action for meeting identified problems	A conference has a specific theme and objectives and often involves other methods and techniques. Unless it is full of lively activities, a conference can be boring if reading on centred long and windy papers. Syndicate discussion groups and plenary sessions at conference promote maximum participation. Discussion however should facilitate adequate opportunity for questioning and explanations.
S2 Workshop	It is teaching/learning experience in which participants learn about the operational problems in their specific field for the purpose of promoting the type of knowledge, skills and attitudes required for their day-today activities.	As a problem-oriented type of learning situation, workshops should provide participants with the opportunity to develop practical ideas and skills which they can use on the job immediately after they return to that job. Unless participants are properly briefed before the workshop, the exercise may not produce valuable learning effect. A number of methods and techniques are also involved. A workshop requires adequate preparation, effective monitoring and follow-up.

A Strategy	Meaning	Comment
S3 Seminar	Traditionally an academic and research oriented gathering in which participants are expected to discuss original research and experience-based issue and problems and exchange results through reports.	Seminar is used differently today to mean any form of learning gathering. If taken in its original meaning most people who attend seminars these days are not qualified.
S4 Symposium	A meeting in which several speakers deliver short addresses or talks on a topic.	Within its strict definitions, symposium provides no opportunity for feedback. It is contemporarily used as an after-dinner large scale discussions. Extremely little application to skills traing.
S5 Sensitivity	This is a laboratory oriented training in which participants learn by studying how different group members perceive events and one another through experientation with different styles of interpersonal behaviour and group work.	Generally unstructured learning strategy designed to improve interpersonal and group skills. Some people find the Strategy very stressful and opponents of Sensitivity training (T-Groups) that some participants suffer "psychological damage". Whilst this is a somewhat controversial issue there is no doubt that T-Groups should be run by people who have received specialized training.

A Strategy	Meaning	Comment
S6 Job Roration	As its name suggests, this involves the learner in sponding periods of time doing a variety of jobs within the organization.	As often practiced, job rotation can be very demotivating and a waste of time. This is because little thought is given to the choice of appropriate jobs - appropriate, that is, both for the learner in his current state of development, and for the potential contribution that can be made to the organization. It is therefore all too common to find trainees being shunted around from department to department, feeling lost and useless. Equally the departments involved find the whole exercise an embarassment.
		On the other hand, if carefully planned, with goals and provision of coaching/counselling and discussion, exercises and projects, job rotation can provide the opportunity for very real benefits to both the learner and the organization.
S7 Institute	This is close to a workshop but it is one problem oriented and generally designed for a particular time of the year.	Generally common in USA such as the Summer Institute for Curriculum Development.

A Strategy	Meaning	Comment
M1 Lecture	The instructor talks to or at his audience explaining concepts, ideas etc. There is relatively very little interaction between speaker and learner; that is, little questioning, discussion, active participation or feedback.	In practice, this is one of the most commonly used methods. However, in recent years its effectiveness has been questioned. A good lecture can be very stimulating, although in general it is considered that lectures are low on motivation. There is strong evidence that people lose interest in listening to a speaker after a relatively short time - approx. 20 minutes
M2 Discussion	Discussion differs from talk and lecture in that the emphasis is how on a true sharing of ideas, rather than press in them on from trainer to learner. In a true discussion, the trainer is almost as likely to be influenced by the learner as vice versa.	Many trainers use discussion to reinforce the idea that they have been putting over in talks. In a sense, this is not the purpose of discussion and might be said to be a particularly participative talk. Real discussion involves a free exploration of ideas, opinions and attitudes, not an attempt to change those in any particular direction. Most learners seem to enjoy discussion, although some, especially those who are very much looking for the "right answer" soon to find it a "waste of time".

A Strategy	Meaning	Comment
M3 Programmed Institution/ Learning	There are two types of programmed learning, which are in fact based on different learning principles and in many ways are very different steps. The learner is then asked to make responses (usually to answer a question) which, due to the very small step, he is bound to get right. By doing this many times he gradually learns to make the desired response whenever asked to do so ie., he always does the right thing.	Programmed learning was originally very much tied to teaching machines. These are, however, no more than complicated, bulky and expensive ways of turning the pages of a book, so nowadays most programmes are in fact, presented in simple book format. The majority of programmes are written for teaching "Knowledge" subjects, but they can be very successful in other areas, such as skills and attitudes. The writing of a programme is a very lengthy and time consuming process. Also, many learners find programmed learning (especially linear programmes) very boring. On the other hand, a well-written programme is probably the most effective expository or explanatory method available.

A Strategy	Meaning	Comment
.4 Case Study (Incident Study)	The learner is given details of an event or situation which includes as much data as is thought appropriate. Using this description as a base, he then (a) analyses the situation to determine what has caused it and/or (b) makes suggestions/recommendations for overcoming the problem Very short case studies (with a minimum amount of date) are often called "incident studies" In some case studies, the learner is given little initial information, but has to decide for himself what other information would be helpful. He can then obtain this other information by asking the tutor. (This is sometimes known as an "information maze").	Case studies are usually but not necessarily carried out in small groups. There is some argument about the extent to which case study learning is transferable back into the work situation. On the one hand, such skills are analysing, interpreting, diagnosing are probably transferabl but on the other hand, some learners make unwarranted transfers of learning, assumin that the cause of the problem in the case study represents the only possible cause of similar problems back to work. All case studies represent gross over-simplifications, often, simple cases, designed to bring out a few points well, are more effective than more ambitious complicated ones. Most learners find case studies highly motivated.

D Method	Meaning	Comment
M5 In-Tray	The learner is presented with a set of material (letters, memos, reports, etc.) which represents a typical "in-tray" of work awaiting attention. He then has to allocate priorities and decide what action to take in respect of each item of material.	The material in the in-tray should preferably be as similar as possible to the type of material/decision needs that the learner will be dealing with in his back-at-work situation.
M6 Role Play	Role playing is used to give practice in a variety of interpersonal situations, in order to develop social skills. The situation are set up by giving each participant a "role brief" - that is a brief description of the setting, the situation, and the character associated with the particular role. Role playing usually involve two people (e.g., customer and clinent; supervisor and worker; interviewer and candidate) but multiple role-plays can also be devised (e.g., for practising committee work; panel interviews).	Widely used for developing social skills. Feedback on the learner's performance may be given either by observance or by recording the role play on video-tape. Although usually popular and motivating, some learners find the role-play stressful and can become very upset or discouraged. Due to the need to act out a role, the method never really examines the true effect of feelings and emotions in interpersonal situations.

D Method	Meaning	Comment
M7 Project	A project is a "real" exercise; that is, although its prime purpose is to provide a learning opportunity, it usually involves working in an organisation (usually the learner's own) on a real problem, i.e., one that is of real significance to that organisation. Thus, carrying out a project involves the use of a wide range of skills, with an end product that is of actual use.	The project provides an opportunity both for the practice of skills that have been learned off-the-job, and for discovery in on-the-job setting. It can therefore play a useful part aiding transfer and in bridging the gap between classroom and working situation.
M8 Business Games Simulation	There is quite an amount of confusion as to exactly what constitutes a "game" or situation" in particular, the difference between "game/"simulation" and "experiential or discovery exercise" (ace below) is not at all clear. As originally used, the term "business game" was reserved specifically for a type of exercise in which learners formed groups which then ran a whole simulated company (usually in competition with other groups) making the sort of decisions usually made by the Board of Directors.	Provided the game is well chosen and well designed i.e., appropriate for the level of learners and for their goals) then learners normally find this method highly enjoyable. One weakness of games/simulations is that they relay on a model of rality; these models will necessarily be over-simplified and there is therefore some danger that participants will form an oversimplified view of the real world.

B Method	Meaning	Comment
M8 (Cont'd)	These decisions were then evaluated by the inmpire (using either appropriate charts and formula or, for bigger simulations a computer) and the results feedback to the teams. This type of simulation is still very much in use, but the term "game" has been widened to include a whole range of learning exercises involving the use of some more-or-less hypothetical "model" of formula for calculating the results or effects of decisions. Thus, games are available, or may be written, covering almost any aspect of organizational behaviour or, indeed, country, national or international behaviour.	The emphasis with games is on the rationalization and logic that is necessarily inherent in virtually all models. This contrasts with experiental exercises (see below) which place much more emphasis on attitudes and feelings.

B Method	Meaning	Comment
M9 Experiential and Discover Exercises	This is teaching/learning by experiential exercises. These exercise try to formalize the principle that we learn much more by doing things, by having things happen to us, and by experiencing things. Thus, learners are put in situations which are so designed as to recreate to the conditions about which they are trying to learn. For example, if the goal is to gain insight into the effects of inadequate communication within an organization, the exercise would involve setting up simulated organization, with goals to achieve, in such a way that communication is hindered. The kearners then experience first hand the effect of this.	Whilst simple discovery exercises can be designed to develop on understanding of basic knowledge concepts), most experiential exercises try to highlight not only the cognitive elements of the subject matters, but also the associated attitudes, feelings and emotions. In practice, experiential learning is mostly confined to such subjects as human relations, industrial relations, personnel management etc. There is no reason, however why such methods cannot be used in connection with any subject matter.

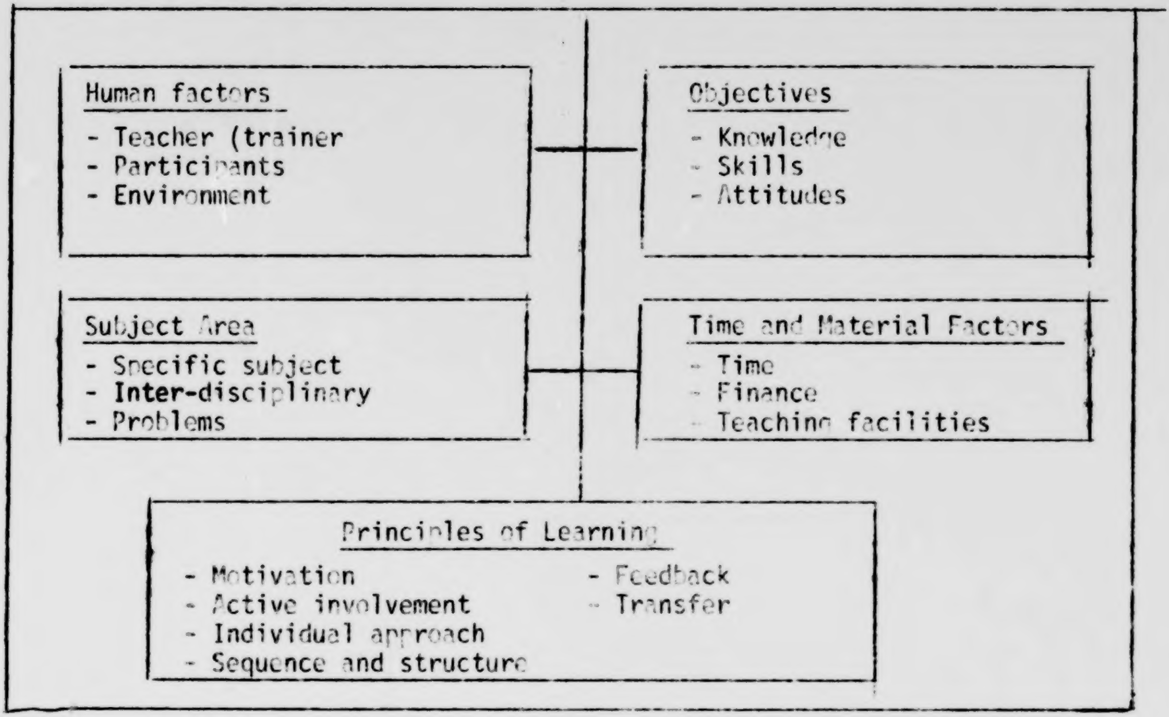
C Technique	Meaning	Comments
T1 Reading	a) Random reading: Many of us learn a great deal from more or less random reading, which involves us in picking up and sorting out reading matter in books and journals. The benefit is often in trying to sort out the differences of opinion or in viewpoint of the different authors. b) Guided reading on the other hand, involves the tutor giving detailed references, handouts etc., to the learner, often with guidelines, and discussion notes and assignments (e.g., questions or exercises) to do, based on the reading	A highly effective technique of training in skills. The well-known "TWI" (Training Within Industry) Programme run by the Department of Employment/Training Services Agency incorporates instruction in how to used the Demonstration Method, both in general and, on the Clerical Supervision Course, for use in training in clerical skills.
T3 Observation	With unguided observation, the learner is simply told to go into situation and watch what goes on. With guided observation, he is given a more detailed briefing, with guidance as to the sort of things to look for; after the observation itself, a debriefing, session is provided, in which the things that were observed are examined and discussed.	In general, unguided observation is both much more common and such less effective than guided observation.

C Technique	Meaning	Comment
T4 Coaching	Coaching is an on-the-job, one-to-one learning situation. The learner is guided and shown what to do and how to do it by an experienced worker. For physical skills, coaching is virtually the same as demonstration. Coaching, however, is by no means restricted to physical skills, but it also useful technique for guiding the individual learner in more or less any type of job or activity.	It might be argued that coaching is potentially the most common technique of teaching. It can be contrasted with counselling (see below), in the coaching involves the "instructor" telling learner what to do, whilst counselling is a directive process in which the counsellor helps the learner decide for himself what to do.
T5 Counselling	Counselling is often related to coaching. In some ways it is indeed similar; thus, it involves counsellor and learner in a one-to-one learning situation, usually in an on-the-job situation. Although the torn "counselling" used to be allied more to personal "welfare" issues than to work problems as such, this no longer so true. The main difference between counselling and coaching is that the emphasis, with the former is on helping the learner to identify the problem for himself, to generate his own possible solutions, and to choose the best solution to weigh up the possible alternative solutions, and to choose the best solution himself. Coaching, on the other hand, involves the coacher telling the learner what to do.	Counselling is much harder than coaching. The relatively non-directive role is not one that most managers or trainers can adopt without s specific training. In cases where it is felt that there is very definitely a correct way of doing things, correct is possibly more appropriate. On the other hand in cases which present scope for initiative, individuality and creativity, a counselling approach will probably be more beneficial.

C Technique	Meaning	Comment
T6 Drill	The learner repeats the facts, does the task, practices the skill, displays the attitude, many times over a period of time, This constant repetition gradually impresses the learning into him. Learning is thus at memory level.	Drill is often boring. To alleviate this, it should be done in relatively short bursts, rests or other activity in between (e.e., drills should be "distributed" rather than "massed". Alternatively, "memrpy gages" or"memory aids"(see below) can be sused.
T7 Memory Games	Rhwaw are really a way of maing "drill" more enjoyable. They vary according to the nature of the subject matter (knowledge, skill or attitude) to be learned. Generally, they often incorporate some degree of individual or team competition. Thus, straight forward drill might be replaced by quizzes, or by card games (e.g., learners can develop a swift ability to match names of things with pictures of them by playing snap, with names on some of the cards and pictures of others).	With a bit of ingenuity, appropriate games can be devised to help with many memory learning situations. Some care must be taken to ensure that the game is suitable not only for the material to be learned, but also for the learner there is a danger that such games might be treated as "a bit of lark".

C Technique	Meaning	Comment
T8 Memory Aids	These might almost be called techniques of avoiding instruction. Instead of trying to memorize a large amount of facts or skills, the learner is provided with an aid for quick reference when required. Thus, when he needs to "remember" something he refers to his instead. Over a period of time he probably will, in fact, memorize much of the material. - check lists - algoriths - information maps - instruction sheets	A tremendous amount of time is often wasted in attempting to commit things to memory unnecessarily. With some thought, this time, energy and money can be saved by using appropriate aids.

Main Factors Affecting the Choice of Teaching Methods [1/]



Human factors
- Teacher (trainer
- Participants
- Environment

Objectives
- Knowledge
- Skills
- Attitudes

Subject Area
- Specific subject
- **Inter-disciplinary**
- Problems

Time and Material Factors
- Time
- Finance
- Teaching facilities

Principles of Learning
- Motivation
- Active involvement
- Individual approach
- Sequence and structure
- Feedback
- Transfer

Application of some Principles of Learning in Teaching Methods

Method Principle	Training on the job	Lecture	Group Discussion	Case Study	Business Game	Role Playing	Application Project	Reading Assignment
Motivation	g	a	a	a	g	a	g	a
Active involvement	g	w	a	g	g	g	g	a
Individual approach	g	w	a	aa	a	a	g	a
Sequencing and Structuring	a	g	w	a	a	w	a	g
Feedback	g	w	a	a	g	g	g	w
Transfer	g	w	w	a	a	a	g	w

[1/] ILO - Teaching and Training Methods for Management Development, 1972 Exhits A and C of 3-9.

SOME SUGGESTIONS ON THE USE OF TERMS

There is a considerable ambiguity in the literature on teaching methods in the use of some of the most common terms. The following are initial suggestions. It may be that new terms will have to be invented in order to clarify needed distinctions.

General Terms

Lesson - A general name for teaching given at one time. The teaching may be by any teaching method or combination of teaching methods. (Although some teachers in higher education feel this term is childish, no such connotation is implied here. It is used as the only general term available).

Period - The whole or part of the time taken by a lesson. For example, "a period of discussion" may be a whole lesson or ten minutes at the end of a lecture.

Session - An academic year (normally consisting of three terms starting in September or October).

Teacher - A general name for one who teaches (as distinct from "Lecturer", a person who is giving a lecture).

A group - A number of people, each of whom can interact with all the others face to face.

Class - A set of students taught together. (This term obviouly has many other uses. It is given here in contrast to "groups").

Discussion Methods of Teaching - Methods of teaching using spontaneous conversation in which all students may take part. (N.B. "Discussion Methods" and "Group Teaching" are not the same, although many specific teaching methods are both).

Presentation or Reception Methods - Methods in which information is presented to the students (the students receive the information). These methods include lectures, audio-tapes, films CCTV and reading. (Programmed learning is not normally included since a student's response is essential, but it has a strong presentation, or reception, element).

Some Specific Teaching Methods

Lecture - A period of uninterrupted talk (not necessarily a complete lesson). This term is here restricted to a particular term of presentation to avoid ambiguity and to limit the psychological conditions it implies.

Step-by-step lecture - A lecture organised around 3 or 4 topics, each of which is talked about for, say, ten minutes followed by discussion or other activity.

Demonstrations - The teacher performs some operation exemplifying a phenomenon or skill while the students watch. (A presentation or reception method).

Buzz groups - Groups of 2-6 members who discuss issues of problems for a short period, or periods, within a lesson.

Brain-storming - An intensive discussion situation in which spontaneous suggestions as solutions to a problem are received uncritically.

Synectics - A development of brain-storming in which special techniques, such as choosing group members from diverse backgrounds, are used to produce a creative solution to the problem.

Problem-centred groups - groups (normally 4-12 members) with a specific task which is discussed.

Case discussion - Real or simulated complex problems are analysed in detail for students to suggest their own solutions or decisions.

Syndicate method - Teaching where the class is divided into groups of about 6 members who work on the same or related problems with intermittent teacher contact and who write a joint report for the critical appraisal of the whole class.

Group tutorial - The topic and general direction is given by the tutor, but the organisation (or lack of it), content and direction of the discussion, depends on the student group (up to 14 members).

Controlled discussion - Teaching in which students may raise questions or comment, but the general direction is under the strict control of the teacher. This is normally used after a presentation method with a class, not a group.

Step-by-step discussion - Teaching by a carefully prepared sequence of issues and questions to draw out the required information from students.

Seminar - Group discussion introduced by the presentation of an essay or other work.

Free group discussion (FGD) - A learning situation in which the topic and direction are controlled by the student group; the teacher observes.

T-Group Method - a method of teaching self-awareness and interpersonal relations based on therapeutic group techniques in which individual group members discuss their relationships with each other.

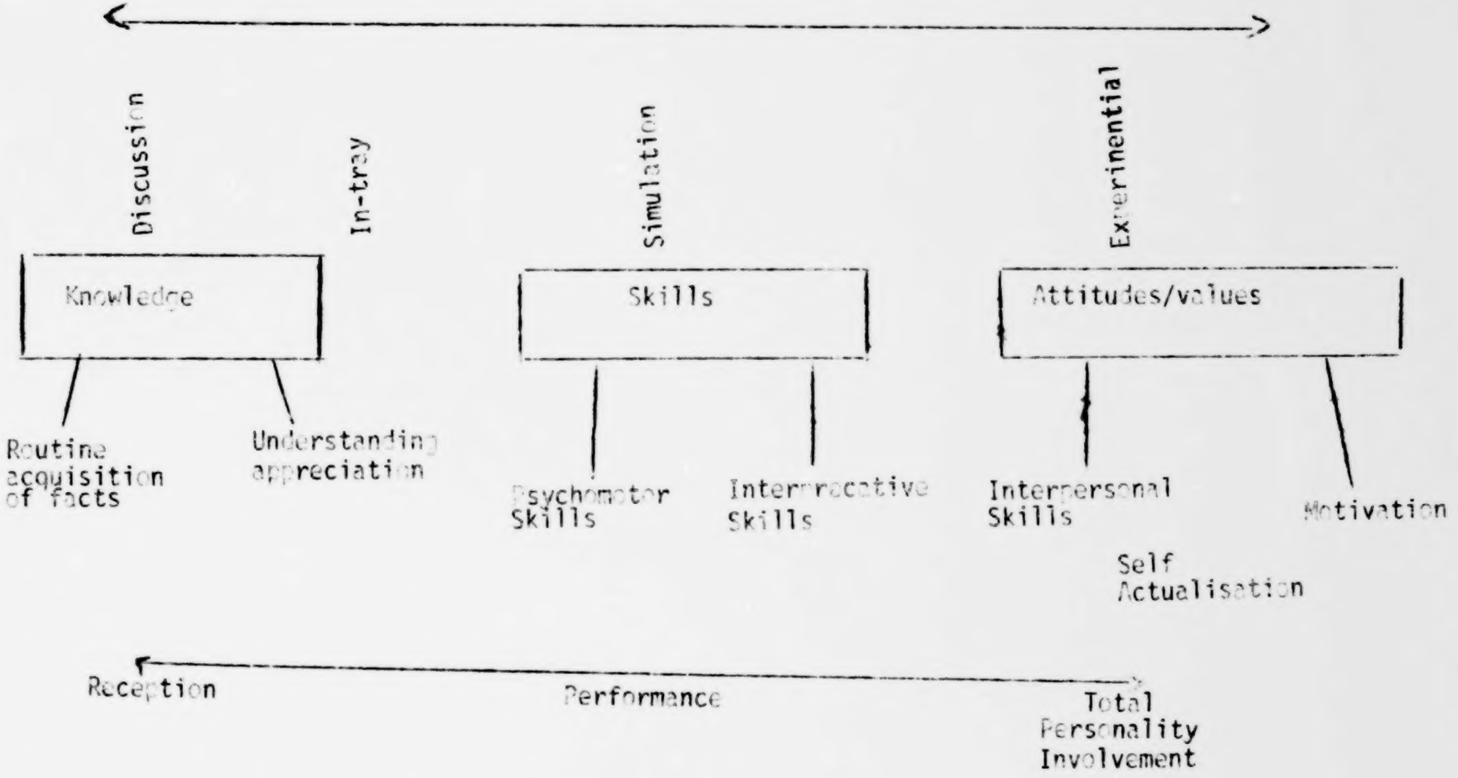
Simulation exercises - Teaching in which a real situation is duplicated in its essential features perhaps in the form of a game or a problem. The participants adopt an appropriate role or status, if possible.

Role-play - Students are given certain social roles and freely dramatise them in a group i.e., they act out their specified role.

Counselling - Students voluntatily consult a trained tutor, doctor or welfare officer about their private or academic problems.

Individual tutorial or "tutorial" - A period of teaching devoted to a single student.

An Overview of Training Methods


Discussion
In-tray
Simulation
Experinential
Knowledge
Skills
Attitudes/values
Routine acquisition of facts
Understanding appreciation
Psychomotor Skills
Interracative Skills
Interpersonal Skills
Motivation
Self Actualisation
Reception
Performance
Total Personality Involvement

COURSE MANUAL FS. 3 - 7

INSTRUCTIONAL OBJECTIVES AND OBJECTIVES IN CURRICULUM DEVELOPMENT

A. PREPARING INSTRUCTIONAL OBJECTIVES

1. A statement of an instructional objective is a statement that describes your instructional intention.

2. An objective can only communicate your intention to the extent to which you have described (i) what the learner will be DOING when he is demonstrating what he has learned and (ii) how you will know when he is doing it.

3. To describe "terminal performance" (what the learner will be doing);

    (a) Identify and/or name the performance desired.

    (b) Define the important conditions under which the performance is to occur (given and/or restrictions and limitations).

    (c) Define the criterion of acceptable performance.

4. Write a separate statement for each objective; the more statements you have, the better chance you have of making clear your intention.

5. If you give each learner a copy of your objectives, you may not have to do much else.

B. WRITING INSTRUCTIONAL OBJECTIVES

Three terms used in writing behavioral objectives are defined:

1. Behaviour:	refers to any visible activity displayed by a learner.
2. Terminal Behaviour:	refers to the behaviour you would like your student to be able to demonstrate at the end of the lesson.
3. Criterion:	is a standard or test by which terminal behaviour is evaluated.

An objective is an intent communicated by a statement describing a proposed change in a learner. It is a description of a pattern of behaviour we want the learner to be able to demonstrate. The statement of objectives must denote measurable attributes observable in the learner.

A meaningful stated objective then is one that states what the learner will be doing, i.e.

to write
to recite
to identify
to differentiate
to solve
to construct
to list
to compare
to constrast

In writing an objective:

1. Identify the terminal behaviour by name; specify the kind of behaviour that will be accepted as evidence that the learner has achieved the objective.
2. Describe the important conditions under which the behaviour will be expected to occur.
3. Specify the criteria of acceptable performance by describing how well the learner must perform. (Minimal level)

Ways of specifying criterion are:

1. Time limit
2. Minimum number of correct responses
3. Define important characteristics of performance accuracy.

C. TAXONOMIC ANALYSIS OF OBJECTIVES'S BEHAVIOUR

I. Taxonomy of Educational Objectives

(i) Cognitive Domain - Intellectual Behaviours
(ii) Affective Domain - Feeling/Valuing Behaviours (Attitude)
(iii) Psychomotor Domain - Physical/Motor Behaviours (e.g. typing)

II. Divisions of Cognitive Domain

Higher 6. Evaluation - Student makes value judgement

Than 5. Synthesis - Student combines elements into a new whole

Lowest 4. Analysis - Student separates complex whole into its parts

3. Application - Student uses abstractions in particular situations

2. Comprehension - Student makes elementary use of material

Lowest I. Knowledge - Student recalls behaviour

There may be some activities involving memorization of certain key definitions and facts. Some useful words for this activity are:

Recall
Duplicate
Repeat
State
Define
Tell
List reasons for
Explain
Imitate

Some verbs should be avoided because, by their very nature, they are so vague they give neither teachers nor pupil a clear idea of what is meant.

Some are:

Appreciate
Deal more effectively with
Understand
Know
Have a feeling for
Comprehend
Develop an understanding
Develop an appreciation of
Become aware of
Become familiar with
Create an awareness of

There is no way to test for appreciation, understanding, etc. These words are not honest words because they do not clearly specify to the teacher or student what is expected. In order to be completely honest, include within your objectives a statement describing the conditions under which you will test for achievement of the objectives.

Taxonomy of Educational Objectives. Presents an analysis of educational goals subdivided into their essential elements. (This is an example of technology in the broadest sense subdividing a practical task into its basic components so that scientific knowledge can be applied effectively).

Bloom's taxonomy does not claim to be "the truth", the only possible analysis of educational goals. However, it does give us a very useful tool which we can use to analyse our particular objectives, to state more precisely just what it is we hope to accomplish.

D. MAJOR CATEGORIES IN THE COGNITIVE DOMAIN OF THE TAXONOMY OF EDUCATIONAL OBJECTIVE (BLOOM 1956)

I. Description of the Major Categories in the Cognitive Domain

1. Knowledge: Knowledge is defined as the remembering of previously learned material. This may involve the recall of a wide range of material, from specific facts to complete theories, but all that is required is the bringing to mind of the appropriate information. Knowledge represents the lowest level of learning outcomes in the cognitive domain.

2. Comprehension: Comprehension is defined as the ability to grasp the meaning of material. This may be shown by translating material from one form to another (words to numbers), by interpreting material (explaining or summarizing), and by estimating future trends (predicting consequences or effects). These learning outcomes go one step beyond the simple remembering of material, and represent the lowest level of understanding.

3. Application: Application refers to the ability to use learned material in new and concrete situations. This may include the application of such thing as rules, methods, concepts, principles, laws, and theories. Learning outcomes in this area require a higher level of understanding than those under comprehension.

4. Analysis: Analysis refers to the ability to break down material into its component parts so that its organizational structure may be understood. This may include the identification of the parts, analysis of the relationships between parts, and recognition of the organizational principles involved. Learning outcomes here represent a higher intellectual level than comprehension and ppplication because they requir an understanding of both the content and the structural form of the material.

5. Synthesis: Synthesis refers to the ability to put parts together to a new whole. This may involve the production of a unique communication (theme or speech), a plan of operations (research proposal), or a set of abstract relations (scheme for classifying information). Learning outcomes in this area stress creative behaviours, with major emphasis on the formulation of new patterns or structures.

6. Evaluation: Evaluation if concerned with the ability to judge the value of material (statement, novel, poem, research report) for a given purpose. The judgements are to be based on definite criteria. These may be internal criteria (organization) or external criteria (relevance to the purpose) and the student may determine the criteria or be given them. Learning outcomes in this area are highest in the cognitive hierarchy because they contain elements of all of the other categories, plus conscious value judgements based on clear defined criteria.

II. Examples of General Instructional Objectives and Behavioural Terms for the Cognitive Domain of the Taxonomy

	Illustrative General Instructional Objectives	Illustrative Behavioural Terms for Stating Specific Learning Outcome
KNOWLEDGE	Knows common terms Knows specific facts Knows Methods and procedures Knows principles	Defines, describes, identifies, Tables, lists, matches, names, outlines, reproduces, selects, states
COMPREHENSION	Understands facts and principles Interprets verbal material Interprets charts and graphs Translates verbal material to mathematical formulas Estimates future consequences implied in data Justifies methods and procedures	Converts, defends, distinguishes, estimates, explains, extends, generalizes, gives examples, infers, paraphrases, predicts, rewrites, summarizes
APPLICATION	Applies concept and principles to new situations Applies laws and theories to practical situations Solves mathematical problems Constructs charts and graphs Demonstrates correct usage of a method of procedure	Changes, computes, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves uses
ANALYSIS	Recognizes unstated assumptions Recognizes logical fallacies in reasoning Distinguishes between facts and inferences Evaluates the relevancy of data Analyzes the organizational structure of a work (art, music writing)	Breaks, down differentiates, distinguishes, identifies, illustrates, infers, outlines points out, relates, selects, separates, subdivides
SYNTHESIS	Writes a well organized theme Gives a well organized speech Writes a creative short story (or poem, or music) Proposes a plan for an expeiment Integrates learning from different areas into a plan for solving a PS problem Formulates a new scheme for classifying objects (or events, or ideas)	Categorizes, combines, compiles, composes, creates, divises, designs, explains, generates, modifies, organizes, plans, rearranges, reconstructs, relates reorganizes, revises, rewrites, summarizes tells, writes
EVALUATION	Judges the logical consistency of written material Judges the adequacy with which conclusions are supported by data Judges the value of a work (art, music, writting) by use of internal criteria Judges the value of a work (art, music, writing (by use of external standards of excellence	Appraises, compares, concludes, constrasts, criticizes, describes, discriminates, explains, justifies, interprets, relates, summarizes,

III. Major Categories in the Affective Domain of the Taxonomy of Educational Objectives (Krathwohl, 1964)

Descriptions of the Major Categories in the Affective Domain

1. Receiving: Receiving refers to the student's willingness to attend to particular phenomena or stimuli (classroom activities, textbook, music etc.). From a teaching standpoint, it is concerned with getting; this area range from the simple awareness that a thin exists to selective attention on the part of the learner. Receiving represents the lowest level of learning outcomes in the affective domain.

2. Responding: Responding refers to active participation on the part of the student. At this level he not only attends to a particular phenomenen but also reacts to it in some way. Learning outcomes in this area may emphasize acquiescence in responding (reads assigned material), willingness to respond (voluntarily reads beyond assignment), or higher levels of this category include those instructional objectives that are commonly classified under "interests"; that is, those that stress the seeking out and enjoyment of particular activities.

3. Valuing: Valuing is concerned with the worth or value a student attaches to a particular object, phenomenon, or behaviour. This ranges in degree from the more simple acceptance of a value (desires to improve group skills) to the more complex level of commitment (assumes responsibility for the effective functioning of the group). Valuing is based on the internalization of a set of specified values, but clues to these values are expressed in the student's overt behaviour. Learning outcomes in this area are concerned with behaviour that is consistent and stable enough to make the value clearly identifiable. Instructional objectives that are commonly classified under "attitudes" and "appreciation" would fall into this category.

4. Organization: Organization is concerned with bringing together different values, resolving conflicts between them, and beginning the building of an internally consistent value system. Thus the emphasis is on comparing, relating, and synthesizing values. Learning outcomes may be concerned with conceptualization of a value (recognizes the responsibility of each individual for improving human relation) or with the organization of a value system (develops a vocational plan that satisfies his need for both economic security and social service). Instructional objectives relating to the development of a philosophy of life would fall into this category.

5. Characterization by a value or value complex: At this level of the affective domain, the individual has a value system that has controlled his behaviour for a sufficiently long time for him to have developed a characteristic "life style". Thus the behaviour is pervasive, consistent, and predictable. Learning outcome at this level cover a broad range of

activities, but the major emphasis is on the fact that the behaviour is typical or characteristic of the student. Instructional objectives that are concerned with the student's general patterns of adjustment (personal, social, emotional) would be here.

IV. Examples of General Instructional Objectives and Behavioural Terms for the Affective Domain of the Taxonomy

	Illustrative General Instructional Objectives	Illustrative Behavioural Terms for Stating Specific Learning Outcomes
RECEIVING	Listens attentively Shows wareness of the importance of learning Shows sensitivity to human needs and social problems Accepts differences of race and culture Attends closely to the classroom activities	Asks, chooses, describes, follows, gives, holds, identifies, locates, names, points to, selects, sits erects, replies, uses
RESPONDING	Completes assigned homework Obeys school rules Participates in class discussion Completes laboratory work Volunteers for special tasks Enjoys helping others	Answers, assists, complies, conforms, discusses, greets, helps, labels, performs, practices, presents, reads, recites, reports, selects, tells, writes
VALUING	Demonstrates belief in the democratic process Appreciates good literature (art or music) Appreciates the role of science (or other subjects) in everyday life shows concern for the welfare of others Demonstrates problem-solving attitude Demonstrates commitment to social improvement	Completes, describes, differentiates, explains, follows, forms, initiates, invites, joins, justifies, proposes, reads, reports, select, shares, studies, works
ORGANIZATION	Recognizes the need for balance between freedom and responsibility in a democracy Recognize the role of systematic planning solving problems Accepts responsibility for his own behaviour Understands and accepts his own strengths and limitations Formulates a life plan in harmony with his abilities, interests, and beliefs	Adheres, alters, arranges, combines, compares, completes, defend, explains, generalizes, identifies, integrates, modifies, orders, organizes, prepares, relates, synthesizes
CHARACTERIZATION	Displays safety consciousness Demonstrates self-reliance in working independently Practices cooperation in group activities Uses objective approach in problem solving Demonstrates industry, punctuality and self-discipline Maintains good health habits	Acts, distriminates, displays, influences, listens, modifies, performs, practices, proposes, qualifies, questions, revises, service, solves, uses, verifies

Hierarachy	Bloom's Categories
1. To help learners develop as resourceful people aware of their own potential	Affective 1.1
2. To assist in the improvement of health and sanitation in the community	Affective 2.2
3. To develop in learners on enquiring and experimental attitude	Affective 3.2
4. To develop national unity	Affective 4.2
5. To help learners develop minds which can cope with the problems of living in a rapidly changing world	Affective 5.1

These were contrasted with cognitive objectives as follows:

1. To help the learners develop the skills of logical thinking	Cognitive 6.2
2. To help learners to develop to their highest capability	Cognitive 6.2

V. Psychomotor Domain

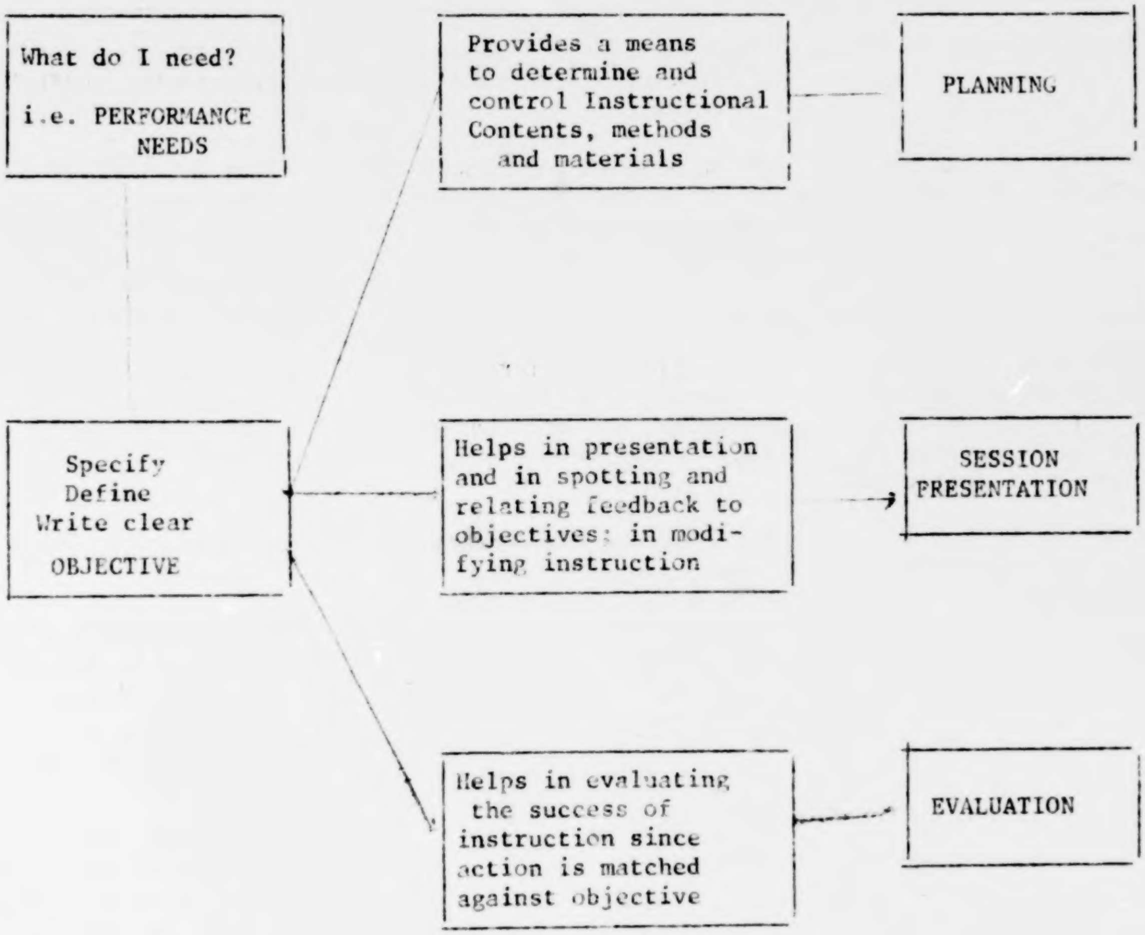
The psycomotor domain includes those objectives of manipulating and motor skills divided into four ascending levels as follows:

1. Observing - refers to attending of performance of a more experienced person;
2. Imitating - refers to the basic rudiments of the skills required;
3. Practicing - refers to the basic repetition of the sequences of phenomena as conscious effort decreases;
4. Adapting - refers to the perfection of the skill, although further improvement is possible.

Examples of psycomotor domain objectives were given as follows:

1. A learner should be able to operate a bunsen burner;
2. At the end of a demonstration a learner should be able to repair a bicycle puncture;
3. A learner should be able to place solids in test tubes using a spatula without any mishap or accident.

F. IMPORTANCE OF CLEAR INSTRUCTURAL OBJECTIVE


What do I need?
i.e. PERFORMANCE NEEDS
Specify
Define
Write clear
OBJECTIVE
Provides a means to determine and control Instructional Contents, methods and materials
PLANNING
Helps in presentation and in spotting and relating feedback to objectives; in modifying instruction
SESSION PRESENTATION
Helps in evaluating the success of instruction since action is matched against objective
EVALUATION

G. INSTRUCTIONAL TECHNOLOGY WORKSHOPS: INSTRUCTIONAL OBJECTIVES

What they are	Components	Utility
Specific statements of intent - de	They are TERMINAL behaviour outcome of instruction and learning	They serve as a cue for guiding instructional/learning action
- describing an outcome of instruction and/or learning	Describing what learners will do to demonstrate acquisition and accomplishment	- They are a GUIDE (a) in promoting independent student study for planning instruction and for proving a standard criteria in evaluating the instructional process
- indicate what a learner learns or should be able to do at the end of an instructional session or as a result of instruction	Indicating behaviors to be accepted as evidence of learning; and are characterised by action verbs	(b) for planning and designing instructional systems. They serve as a guide for:
- describe the behaviour expected of a learner after instruction	They state or indicate the conditions under which terminal behaviour will be demonstrated	(i) choice of subject matter content (ii) sequencing information flow i.e. determining lesson steps
	Or situation in which learner will demonstrate mastery	(c) determining instructional pace
They are - measurable - observable and - operational	tools to use restrictions etc.,	d. selection of instructional methods and media
They are descriptions of intended outcomes and standards to be achieved or surpassed.	They indicate STANDARD OF PERFORMANCE by describing minimum acceptable level of performance PROFICIENCY.	e. measuring student acquisition and accomplishment
They are learner oriented.		f. measuring the instructional process; g. measuring teacher performance

H. CATEGORIES

TERMAL	ENABLING
They are objectives for a given unit of instruction	They are sub-objectives within a given unit of instruction
- Indicating a major task to be accomplished for behaviour to be engaged in at the end of instruction	- Indicating sub-tasks the accomplishment of which constitute a major task
Describing a major intent of an instructional outcome of an instructional unit	- Representing sub-units of instructing
- Indicating conditions under which mastery will be demonstrated	- Constituting steps of instruction and a hierarchy of learning accomplishment levels towards the attainment of a total unit objective
- Indicating minimum acceptable level of performance proficiency	- They are pre-requisites or indicators for the attainment of terminal objectives
	- They are basis from which accomplishment of main intent can be inferred
They describe a major task to be acquired and accomplished within a unit of instruction.	They describe the sub-tasks which are prerequisites within and for attainment of a a major unit of instruction.

They are characterised by ACTION VERBS which OBSERVABLE, and whose outcome in MEASURABLE and demonstrable; and accomplishment TERMINAL, in that one can not be asked to demonstrate or explain how to recognize one when one sees one.

OBJECTIVES IN CURRICULUM DEVELOPMENT

1. Curriculum Aims are statements that describe expective life outcomes based on some value either conciously or unconciously borrowed from philosophy.

   They do not directly relate to the school or classroom because they are removed from classroom/school situation as the degree of their achievement is determinable, only after completion of one's school.

2. Curriculum Goals refer to 'school outcomes' reflecting either outcomes specified at the individual school level or at the general school system level. Curriculum goals are often long-range and removed from immediate cla room assessment. They can therefore be referred to as general objectives in the sense that they focus on activities and are generally broader in character than specific objectives.

3. An Objective refers to an intended change to be brought about in a learner described in terms of measurable learner behaviour. It must therefore be absolutely specific, more readily observable and measurable so that one can determine whether a learner is making progress during the course.

   An Objective is an intent communicated by a statement describing a proposed change in a learner. It is a description of a pattern of behaviour we want the learner to demonstrate after undergoing a learning situation. The state ment of objectives must denote measurable attributes observable in the learner.

   Therefore, a statement of an instructional objective is a statement which describes an instructional intention. It can only communicate one's intenti to the extent to which one has described:

   (a) What the learner will be doing when demonstrating what he has learnt an

   (b) How one will know when the learner is doing it.

4. Levels of Objectives

   Can be specified on two levels:

   (i) First level delineates the terminal objectives which state what the learner will do in terms of a continuum of experience during a programm of study.

   (ii) Interim/Enabiling Objectives which assist in the fulfilment of terminal objectives - they are a prerequisite to the fulfilment of the terminal ones.

5. Categories of Objectives

Three major categories:

(a) Cognitive domain - which refer to objectives concerned with knowledge or information and intellectual abilities:

naming, listening, solving, explaining, applying, judging, appreciating, evaluating, etc.

(b) Psycho-motor Domaindealing with skills requiring the use of co-ordination of skeletal muscles; performing; manipulating and constructing etc.

(c) Affective Domain considers behaviour relating to feelings emotions, attitudes and appreciations: enjoying, conserving, respecting, valuing etc.

Examples

(a) To develop in learners the skills of logical thinking (Cognitive).

(b) To help learners develop as resourceful persons aware of their own potential (Affective).

(c) To develop in learners technical and manipulative skills for producing goods and handicrafts. (Psycho-Motor).

ROLE OF OBJECTIVES

Each level of objectives has implications for the Curriculum Developer.

1. The National goals of education enable the curriculum developer to detemine the objective for a cycle of education:

   (a) Primary Education Objectives

   (b) Objectives for Secondary Education

   (c) Objectives for Teacher Education

   (d) Objectives of Higher Education.

2. The Objectives of a given cycle of education lead to a determination of the curriculum for that level of education.

   For example, from the National Goals of Education we derive the primary Education Objectives and from those we determined the Primary Education Curriculum.

   (i) National Goals

   (ii) Primary Education Objectives

   (iii) Primary Education Curriculum

AIMS, GOALS AND OBJECTIVES

We consider three levels of Goals:

ULTIMATE GOALS:

(i) These are the expected end-products of an education carried out over a long period of time.

(ii) They are the kinds of behaviour that the educator hopes the students will exhibit as a result of the education they have received.

(iii) They are the statements of desirable Acts, Feelings, Attitudes and knowledge integrated in a pattern and exhibited in appropriate situations.

ULTIMATE GOALS ARE LONG TERM

MEDIATE GOALS

(i) They are the patterns of expected behaviour at the various stages of the education cycle.

(ii) The behaviour of a seven year old is not the same as that of a ten year old.

(iii) Patterns of behaviour are developed through learning experiences over a period of time.

(iv) Certain behaviours which may be intended at one level cannot be instilled or developed unless and until certain other behaviour have been establishe at an earlier stage.

(v) Mediate Goals are statements of intended behaviours in different situations for different age groups at different levels of education.

PROXIMATE GOALS

(i) They are the most specific statements of intended behavioural outcomes possible.

(ii) They are measurable and permit of Evaluation.

(iii) They are commonly known as specific Objectives.

EDUCATIONAL EXPERIENCES TO ACHIEVE INTENDED OUTCOMES

(i) Educational experiences must be concerned not only with intended outcomes but also with initial behavioural status;

(ii) It is necessary to know the actual behaviour of the children before the learning experience is set up;

(iii) Prior behaviour can only be adequately assessed in the class-room.

SOURCES OF OBJECTIVES

According to Kerr the following are the sources of objectives:

Pupils : Level of development of the pupils, their needs and interest

Society : Social conditions and problems which the children are likely to encounter

Disciplines the nature of the subject matter.

Professor Lawton suggest the following Philosophical Considerations:

Worthwhileness
Structure of knowledge
Our philosophy of life

Sociological:

Theories of development
Theories of learning and teaching Motivation

SOURCES OF OBJECTIVES

TYLER :

The learners themselves
The needs of contemporary society
Philosophy: Our sets of values
The nature of the subject matter
Psychology: The way children learn

In addition there are these sources:

- Financial resources available to education
- The nature of the available teaching force
- The quality of the teaching-learning environment
- Political directives
- The uses of knowledge

FOCUS OF DISCUSSION

(i) National Goals of Education

(ii) Primary Education Objectives

(iii) Primary Education Curriculum

Hierarchies of objectives in Curriculum Development

- National Goals of Education
- Objectives of a cycle of education
  e.g. Primary Education Objectives
-
- Subject Objectives
- Topic or Unit Objectives
- Lesson Objectives or Instructional Objectives

NATIONAL GOALS OF EDUCATION

- These are derived from a situation analysis of the country
- They are used for the articulation of Primary Education Objectives

INDIVIDUAL SUBJECT OBJECTIVES

A study and analysis of the National Goals of Education as well as the objectives of a level of education will help establish the objectives for including a particular subject in the curriculum.

OBJECTIVES AND THE SELECTION OF LEARNING EXPERIENCES AND CONTENT

Key criteria for selecting content and learning experiences are validity and comprehensiveness.

1. Validity implies close connection between content and the intended learning outcomes.

   For every objective, there must be corresponding content.

   Content and learning experiences are selected only if they contribute to or promote the attainment of the intended learning outcomes.

2. Comprehensiveness implies that all the objectives which have been enunciated about a curriculum should also have corresponding learning experiences.

OBJECTIVES IN CURRICULUM EVALUATION

Evaluation is not possible unless the intended learning outcomes have been stated.

1. Certain goals have been stated.
   Certain behaviour are expected.
   Do these occur?
   Have the students actually acquired the facts,
   The knowledge, the skills, the attitudes, the beliefs and values
   that were intended?

2. Were the experiences chosen suitable for attaining the intended learning outcomes?

3. Did the content selected contribute to the attainment of the objectives?

4. Was the organization and integration of learning experiences and content effective?

CATEGORIES OF EDUCATIONAL OBJECTIVES

There are three categories of educational objectives:

1. Cognitive Domain - intellectual behaviours
2. Affective Domain - feeling/valuing behaviours (attitudes)
3. Psychomotor Domain - Psysical/motor behaviours, e.g. typing

1. Cognitive Domain

May be divided into six levels:

(a) Knowledge - student recalls behaviour i.e.the ability to remember learned material;

(b) Comprehension - student makes elementary use of material, i.e. the abil to grasp and make use of material learned;

(c) Applications - student uses abstractions in particular situation, i.e. the ability to use learned material learned in new and concrete situati

(d) Analysis - student separates complex wholes into their parts, i.e. the ability to break down material into its component parts so that its organizational structure may be understood;

(e) Synthesis - student combines elements into a new whole, i.e. the abilit to judge the value of material, statement, report etc., for a given purpose.

2. Affective Domain

Five levels can be identified:

(a) Receiving - The Learner's willingness to attend to a particular phenomena or stimuli, i.e. it is concerned with getting, holding and directing the learner's attention;

(b) Responding - Active participation on the part of the learner, i.e. will responding to particular phenomenon and reacting to it in some way.

VALUING - The value attached by a learner to a particular object, phenomenon or behaviour.

ORGANIZATION - Bringing together different values, resolving conflicts between them and making a value system out of them.

CHARACTERIZATION - A value system controlls an individual's behaviour as to characterize a life style, i.e. consistent or predictable as form a urban character trail.

PSYCHOMOTOR DOMAIN - This is not hierarchically catergorized, but remains important category of the educational objectives in teaching practical and vocational skills and in the attainment of objectives.

NATIONAL GOALS OF EDUCATION IN MALAWI

These have been broadly stated as follows:

1. To support and serve the precepts and cornerstones of the Republic Malawi in a spirit of unswering loyalty and dedication.
2. To uphold the ethical integreties and socio-cultural traditions accepted in the nation.
3. To apply with the utmost vigour at every opportunity support for the maintenance of self-sufficiency in food production and the increase of Agricultural productivity for export purposes.
4. To provide a broadly based well-round education programme serving both personal advancement and the development of the nation's human resources.
5. To provide opportunity for the present generation of children to achieve a given level of permanent literaly, numeracy ethical and socio-economic knowledge and skills.

NATIONAL GOALS OF EDUCATION IN MALAWI

The national goals of education in Malawi are very broad general statements of intent; they are vague and imprecise.

These goals can be restated under the following headings:

- Citizenship skills
- Ethical and socio-cultural skills
- Economic development skills
- Occupational skills
- Communication skills
- Practical skills
- Physical and health education skills

TASK

Under each heading articulate a set of national goals of education.

MALAWI: NATIONAL GOALS OF EDUCATION

CITIZENSHIP SKILLS

Education should:

- Foster unity, obedience, loyalty and discipline;
- Inculcate a spirit of leadership;
- Develop an awareness of one's rights as a citizen;
- Encourage participation in civic affairs of one's community;
- Develop a spirit of tolerance;
- Foster respect for each other;
- Provide knowledge and understanding of the machinery of government.

ETHICAL AND SOCIO CULTURAL SKILLS

Education should:

(a) inculcate acceptable standards of behaviour;

(b) develop an appreciation for and practice of one's culture;

(c) help preserve Malawi's traditions and customs;

(d) promote spiritual and moral development;

(e) help discard belief in taboos and superstitious which retard nationa development.

ECONOMIC DEVELOPMENT SKILLS

Education should:

(a) create in the learner an awareness of the dependence of Malawi's economy on agriculture;

(b) inculcate the practice of appropriate agricultural methods in food and cash crop production and in animal husbandry;

(c) develop in the learner an awareness of the proper utilization and conservation of natural resources;

(d) develop in the pupils interest in farming as an occupation.

OCCUPATION SKILLS

Education should:

(a) impart vocational skills in order to raise personal income and improve health and living standards;

(b) develop in the learner managerial and decision-making skill;

(c) provide basic knowledge and study skills necessary for personal advancement, and the development of society.

COMMUNICATION SKILLS

Education should inculcate permanent functional literacy and numeracy and effective communication of thought.

PRACTICAL SKILLS

Education should:

(a) develop useful skills related to industrial arts;

(b) inculcate in the learner, love and respect for the dignity of labour.

PHYSICAL AND HEALTH EDUCATION SKILLS

Education should:

(a) demosntrate to the learner the need for physical exercise, sport and recreation;

(b) promote the maintenance of a strong and healthy body through hygiens, nutrition and sanitary care.

PRIMARY EDUCATION OBJECTIVES

Primary Education Objectives are derived from the national goals of education.

The primary education objectives will be stated in terms of student behaviour as follows:

The pupils will:

1. develop the spirit of Unity, Loyalty? Obedience and Discipline;
2. demonstrate spirit of leadership;
3. know their rights and duties as citizens;

4. be tolerant and respectful of others;

5. demonstrate a spirit of cooperation in communal affairs;

6. know the machinery of the Government of Malawi;

7. develop acceptable standards of behaviour;

8. develop an appreciation for the practice of one's culture;

9. understand Malawi's traditions and customs;

10. develop spiritual and moral values;

11. know the effects of belief in taboos and superstition on national development;

12. develop a positive attitudes towards agriculture;

13. apply appropriate agricultural methods to food, cash crop and animal production;

14. apply knowledge and skills in food preparation and preservation and nutritional values;

15. utilize and conserve natural resources;

16. acquire vocational skills in order to raise personal income, better health and standard of living;

17. develop an ability to design and make craft-work;

18. develop managerial and decision-making skills;

19. acquired the basic knowledge and study skills necessary for personal advancement and the development of society;

20. communicate in Chichewa and English through speech, listening, reading and writing;

21. apply mathematical skills in every day life;

22. apply practical skills related to industrial arts;

23. show love and respect for the dignity of labour;

24. acquire appropriate techniques for physical exercise, sports and recreation;

25. keep the human body strong and healthy through hygiene, nutrition and sanitary care;

26. adopt a scientific approach and attitude to problem solving;

27. observe and analyse the natural and physical environment in order to understand the inter-relationships of natural phenomena;

28. understand important past and present institutions in Malawi;

29. interprete maps, charts and other data;

30. understand the importance of international cooperation;

31. be aware of Malawi's dependency on agriculture;

32. develop an imaginative and creative mind.

PROPOSED PRIMARY EDUCATION
CURRICULUM IN MALAWI

Using the articulated Primary Education Objectives, we can determine the Primary Education Curriculum..

First consider what subject or disciplines will ensure the attainment of objectives.

Second, consider the rationale for the proposed curriculum design.

- Consequences of expanded primary education.

- Limited secondary places.

- Terminal nature of the primary system.

- Too examination oriented.

- Broad based education.

The Proposed Curriculum

In the light of the rationals and consistent with the objectives of pri education in Malawi, the Curriculum consists of the following:

- Arithmetic
- Agriculture
- Reading and Writing
- Chichewa
- English
- Environmental Studies
- Science and Health Education
- Home Economics and Needle craft
- Physical Education
- Creative Arts and Music
- Religious Education
- Social Studies

Two Curriculum Designs have been used:

- The Integrated Approach
- Subject-Centred Approach

(a) The Integrated Curriculum Design

This consists of:

(i) Environmental studies for stds. (Grades) 1 to 4;
(ii) Social Studies for Stds. 5 to 8;
(iii) Creative Arts and Music.

(b) Subject-Centred Design

Consists of:

- Arithmetic
- Chichewa
- English
- Home Economics

- Needlecraft
- Religious Education
- Science and Health Education

NOTE

ENVIRONMENTAL EDUCATION	SOCIAL STUDIES
- Agriculture	- History and civics
- Science	- Geography
- History and Civics	- Elements of culture
- Geography	- Elements of culture
- Health Education	- Elements of Economics

CURRICULUM MATRIX (MALAWI)

SUBJECTS STDS								
ARITHMETIC								
AGRICULTURE								
CHICHEWA								
ENGLISH								
ENVIRONMENTAL STUDIES								
SOCIAL STUDIES								
SCIENCE & HEALTH EDUCATION								
HOME ECONOMICS								
NEEDLE CRAFT								
PHYSICAL EDUCATION								
CREATIVE ART/MUSIC								
RELIGIOUS EDUCATION								